

## THE DIPTERA OF THE TERRITORY OF NEW GUINEA. VII.

## FAMILY OTITIDAE (ORTALIDAE).

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*(Communicated by Frank H. Taylor, F.R.E.S., F.Z.S.)*

(Plates iv-v.)

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This family is in many respects similar to the Trypetidae, the only almost invariably dependable character for its separation therefrom consisting of the lack of incurved anterior orbital bristles on the frons. The course of the subcostal vein at its apex is also usually distinctive, the vein in the Otitidae normally gradually approaching the costa and connecting with it at an acute angle, while in the Trypetidae the vein makes an abrupt angular bend forward close to its apex and is usually faint beyond the angle. All the New Guinea Otitidae lack the presutural bristle.

There have been many species recorded from New Guinea and adjacent islands, as the peculiar forms and distinctive colour markings of most of them readily attract collectors. In the Australian region the family is represented almost exclusively by the subfamily Platystominae, though some species of almost cosmopolitan occurrence have been brought in, probably by commerce.

The late Dr. F. Hendel published many papers on the family, the most interesting of them, from an Australian point of view, being that on the Platystominae. This is the predominant subfamily in the Indo-Australian region, more than half of the approximately 500 species occurring in the region, and in 1914 only 45 in North and South America.

I present herein a key to the New Guinea and Australian genera of Platystominae based upon materials available to me and to some extent upon data obtained from Hendel's paper when the genus or species is not available.

In 1924 Enderlein published a paper in which he erected several new genera and described some new species from this region. I have incorporated his work herein.

Material collected in Papua and Dutch New Guinea by Miss L. E. Cheesman has been included in this paper for geographical reasons, thus rendering the paper more valuable.

I have to thank the British Museum (Nat. Hist.) authorities for photographs of the wings of the type-specimens of the species in their material, and Mr. Frank H. Taylor for the other photographs of wings when the types belong to the School of Public Health and Tropical Medicine, University of Sydney.

## Subfamily ULIDIINAE.

In this collection there is but one species of this subfamily. This is an almost cosmopolitan species which occurs in adjoining islands and Australia.

PSEUDEUXESTA Hendel. (*Gen. Ins.*, Fasc. 106, 1910, 30.)

## PSEUDEUXESTA PRIMA Osten-Sacken.

*Ann. Mus. Civ. Stor. Nat. Genov.*, xvi, 1881, 470 (*Euxesta*).—*Euxesta semifasciata* Malloch, *Insects of Samoa*, pt. 6, Diptera, fasc. 5, 1930, 216.

Originally described from Celebes and known from many other localities, including Hawaii.

There is a single specimen in the collection from Wewak, New Guinea (F. H. Taylor).

## Subfamily PLATYSTOMINAE.

The genus name *Platystoma* is preoccupied in Mollusca, but up to the present no writer on the group has proposed a new name for the genus.

The group segregated here may be distinguished from others in the family by the presence of short stiff setulae on the upper surface of the first vein, usually extending from near the humeral cross-vein to its apex, the lack of the propleural bristle, and the presence of at most three bristles between the suture and the anterior lateral angle of the scutellum, i.e., one supra-alar and two postalars. Hendel has attempted to separate the group from the Pyrgotidae by the shorter basal two antennal segments and the presence of ocelli, but these characters do not invariably apply, as some Pyrgotidae have ocelli, and short basal segments to the antennae.

*Key to the Genera.*

1. Eyes quite densely haired; arista long haired; frons with two pairs of fronto-orbital bristles; fifth wing-vein with stiff setulae along the entire extent of the posterior basal cell on upper surface ..... 2  
Eyes not distinctly haired; other characters not as above *in toto* ..... 3
2. Face below antennal foveae with two rounded or oval elevations .. *Lasioxiria* Hendel  
Face without such elevations ..... *Dasyortalis* Hendel
3. All femora with some short stout ventral spines ..... 3a  
At most one pair of femora with short stout ventral spines ..... 3b
- 3a. All femora with anteroventral and posteroventral spines; an extra cross-vein between second and third veins; arista subnude (Samoa) ..... *Apactoneura* Malloch  
Only mid and hind femora with biseriate ventral spines, the fore femora with spines on anteroventral surface only; venation normal; arista long-haired (Samoa) ..... *Xenognathus* Malloch
- 3b. Suprasquamal ridge with erect hairs near posterior extremity; stem vein of the wing bare at base above; lower squama about twice as large as upper; no fronto-orbital bristles on frons; arista bare or almost so (Australia) .....  
..... *Duomyia* Walker  
Suprasquamal ridge bare, or if haired then the stem vein of the wing is haired above at base, or the other characters are not all as above ..... 4
4. Mesopleura, sternopleura and pteropleura with numerous short stout bristles .....  
..... *Pseudocleitamia*, n. gen.  
The above sclerites of pleura without short stout bristles ..... 4a
- 4a. Elongate slender species, the abdomen slim, not widened at base or at middle and usually quite noticeably laterally compressed; arista never long haired, if noticeably haired at base then bare beyond middle, or extremely long and with dense short white hairs on entire extent that give it the appearance of being thickened; antennal foveae usually long and distinct; sternopleural bristle always lacking; fourth wing-vein never setulose above along posterior basal cell ..... 5  
Stouter species, the thorax sometimes much wider than long, the abdomen either wide at base or centrally, never laterally compressed, if rather slender species the arista is haired to apex; fourth wing-vein sometimes setulose in part above ..... 14
5. Third antennal segment with quite dense decumbent stiff black hairs; face more or less produced above, receding below ..... *Conicipithea* Hendel  
Third antennal segment not stiff haired; face not receding below ..... 6

6. Antennae and aristaes exceptionally long, the former longer than the face, the aristaes still longer and with a thickened appearance because of the presence of dense short white hairs; humeral bristle lacking ..... 7  
 Antennae usually not longer than the face, the aristaes shorter and never with dense short white hairs; humeral bristle present or lacking ..... 8
7. Fourth wing-vein making a wide shallow dip into the discal cell from inner to outer cross-vein and angularly bent up just beyond that vein; cross-veins rather widely separated ..... *Philocompus* Osten-Sacken  
 Fourth wing-vein not dipped down into discal cell from inner to outer cross-vein, and not angularly bent upward just beyond outer cross-vein; cross-veins quite closely placed, sometimes interstitial ..... *Antineura* Osten-Sacken
8. First posterior cell of the wing quite noticeably narrowed at apex, the fourth vein either sloping forward from outer cross-vein or with its apex curved appreciably forward ..... 9  
 First posterior cell of the wing not narrowed at apex, the fourth vein either straight or with its apex slightly downwardly sloped ..... 13
9. Frons deeply or rather closely pitted or punctured; parafacials wrinkled above; facial carina prominent, in profile exposed at least as widely as parafacial, rounded on dorsum; two fine pairs of fronto-orbital bristles generally visible ..... *Rhytidortalis* Hendel  
 Frons not distinctly punctured nor the parafacials wrinkled above, the facial carina not prominent in profile ..... 10
10. Mesonotum as wide as long; frontal orbits with two pairs of bristles; mouth opening very large, male with a beard of long downwardly-directed bristles on posterior portion of jowls ..... *Pogonortalis* Hendel  
 Mesonotum longer than wide; frons with at most one pair of orbital bristles .... 11
11. Penultimate section of fourth wing-vein about one-fifth as long as ultimate and only as long as the outer cross-vein, the latter as long as ultimate section of fifth vein; frons wrinkled ..... *Microepicausta* Hendel  
 Penultimate section of fourth wing-vein longer, the outer cross-vein much nearer to the apex of fifth vein and tip of wing than in the above; frons smooth .... 12
12. Inner cross-vein of the wing oblique, upper extremity much nearer to the base of wing than the lower; face with some fine short hairs in centre ..... *Plagiostenopterina* Hendel  
 Inner cross-vein of the wing erect or almost so; face bare in centre ..... *Elassogaster* Bigot
13. Frons with two pairs of orbital bristles ..... 13a  
 Frons with but one pair of orbital bristles ..... *Pseudepicausta* Hendel
- 13a. Inner cross-vein of wing more than one-third from apex of discal cell ..... *Scotinosoma* Loew  
 Inner cross-vein of wing not more than one-fifth from apex of discal cell ..... *Euxestomoea* Hendel
14. Sternopleura with a strong upper marginal bristle ..... 15  
 Sternopleura without a well-developed bristle ..... 16
15. First posterior cell of the wing narrowed at apex; second vein nearer to third than to costa; head higher than wide in front (Australia) ..... *Celetor* Loew  
 First posterior cell of the wing not noticeably narrowed at apex; second vein nearer to costa than to third vein; head seen from in front as wide as or wider than high ..... *Scholastes* Loew
16. Mid femur much stouter and distinctly longer than the hind one, with two series of short strong ventral bristles ..... 17  
 Mid femur not thicker nor longer than the other pairs, if slightly stouter then with at most fine ventral bristles ..... 18
17. Antennal bases close together, separated by less than the width of the third antennal segment; discal cell of the wing much narrower at base than at apex ..... *Brea* Walker  
 Antennal bases widely separated, distance between them exceeding length of third antennal segment; discal cell of the wing almost as wide at base as at apex .... *Mesoctenia* Enderlein
18. Hind femur much stouter than the other pairs and armed below with short stout black bristles or spines (Pacific Islands, Fiji, Samoa) .. *Pseudorichardia* Hendel  
 All femora about equally thick, hind pair without stout ventral spines ..... 19

19. Cross-veins of the wing quite close together, the penultimate section of fourth vein not one-fifth as long as the antepenultimate one ..... 20  
 Cross-veins of the wing not exceptionally close together, the penultimate section of fourth vein not less than one-third as long as the antepenultimate one .... 23
20. Frons with two pairs of strong orbital bristles; arista with very short hairs; fifth abdominal tergite in the male not long-bristled at apex .... *Euxestomoea* Hendel  
 Frons without or with but one pair of orbital bristles except in *Loriomyia*; arista rather long haired; fifth abdominal tergite of the male long-bristled at apex; squamae small ..... 21
21. The cross-vein closing the anal cell angled below middle, broken, the cell at apex below forming a short point; two pairs of fronto-orbital bristles .....  
 ..... *Loriomyia* Kertész  
 The cross-vein closing the anal cell rather angularly curved outward at middle, the cell not pointed below at apex ..... 22
22. Second wing-vein usually much bent forward at apex, unusually close to first near costa, sometimes almost fused with it, its tip much closer to that of first than to tip of third in costa; head of male frequently widened, but never with pedunculate eyes ..... 22a  
 Second and first wing-veins never approaching each other apically; male with the eyes on variably long stalks ..... *Laglaisia* Bigot
- 22a. Second wing-vein much closer to third than to first on apical section of latter; one pair of strong orbital bristles present ..... *Cleittamia* Macquart  
 Second wing-vein at least as close to first as to third on apical section of former; no orbital bristle present ..... *Cleittamoides*, n. gen.
23. Anal cell closed by an angulate cross-vein, produced into a distinct, sometimes elongate, point or lobe at lower apical angle; frons with only the outer verticals present and one pair of orbitals ..... *Neosophira* Hendel\*  
 Anal cell closed by a straight or slightly curved cross-vein at apex, not produced into a point or lobe at lower apical angle ..... 24
24. Extremely short stout species, the thorax broader than long, the mesopleura well exposed when seen from above, the tergites of basal half of abdomen in female usually more or less telescoped so that the abdomen is usually not longer than wide excluding the ovipositor; first posterior cell of the wing almost invariably parallel-sided or widened at apex ..... 25  
 More elongate species, both the thorax and abdomen longer than wide, the segments of the latter not noticeably telescoped; first posterior cell of wing usually narrowed apically ..... 30
25. Posterior basal cell of the wing longer and larger than the discal cell; wings more or less folded lengthwise and crosswise centrally, usually held close against the abdomen and depressed at apices ..... 26  
 Posterior basal cell of the wing shorter and smaller than the discal cell; wings not distinctly folded ..... 27
26. Antennal bases rather widely separated; fourth wing-vein ending in the wing-tip; vein closing the anal cell sloping outward posteriorly so that the cell is rather acutely pointed below at apex ..... *Asyntona* Osten-Sacken  
 Antennal bases closer together; fourth wing-vein ending below wing-tip; vein closing anal cell erect or sloping forward anteriorly, the cell transverse at apex .....  
 ..... *Naupoda* Osten-Sacken
27. Frons with a pair of strong orbital and two vertical bristles; antennae short, inserted at middle of eyes in profile; arista plumose; ultimate section of fourth vein slightly curved upward ..... *Chaetorivellia* de Meijere  
 Frons without distinct orbital bristles; antennae inserted below middle of eyes in profile; ultimate section of fourth vein not bent upward ..... 28
28. Bases of antennae close together; discal cell of the wing much narrower at base than at apex ..... 29  
 Bases of antennae well separated; discal cell of wing nearly as wide at base as at apex ..... *Zygaenula* Doleschall
29. Base of stem vein of the wing haired above; clypeus not tumid at lateral angles ....  
 ..... *Pterogenia* Bigot  
 Base of stem vein of the wing bare above; clypeus tumid at each lateral angle ....  
 ..... *Neohemigaster*, n.n.

\* Hendel included this genus in his key of genera of the Platystominiinae, but it will be dealt with in a subsequent paper, of this series, on the family Trypetidae.

30. Posterior basal cell of the wing four-fifths as long as the discal cell; fourth vein as in *Rivellia*, distinctly dipped down before inner cross-vein; frons with two pairs of orbital bristles ..... *Loxoneuroides* Hendel  
 Posterior basal cell of the wing about half as long as discal cell ..... 31
31. Fourth wing-vein distinctly dipped down into discal cell just before inner cross-vein; frons with two pairs of orbital bristles ..... *Rivellia* Robineau-Desvoidy  
 Fourth wing-vein not noticeably dipped down in front of inner cross-vein ..... 32
32. Squamae small; arista moderately long haired on entire length; base of R bare above ..... 33  
 Squamae large, the lower one exceptionally so; if the eyes are protruded laterally the abdomen is not petiolate at the base ..... 34
33. Eyes protruded laterally; abdomen pedunculated; first posterior cell of wing narrowed to apex; wing with or without a dark costal border ..... *Achiosoma* Hendel  
 Eyes not protruded laterally; abdomen elongate-ovate, not pedunculate; first posterior cell of wing not narrowed apically; wing dark brown, with many small hyaline spots in the cells ..... *Euthyplatystoma* Hendel
34. Base of the radial, or stem, vein of the wing without setulose hairs or bristles above ..... 35  
 Base of the stem vein of the wing with stiff hairs or bristles above ..... 38
35. Eyes of male, and to a lesser extent those of female, protruded laterally, the head distinctly wider than the thorax ..... *Achias* Fabricius  
 Eyes in neither sex at all protruded laterally, the head not distinctly wider than the thorax ..... 36
36. Fore femur with several strong ventral bristles ..... *Holocnemia* Enderlein  
 Fore femur without strong ventral bristles ..... 37
37. Scutellum with two stout pointed thorns at apex ..... *Ceratopelta* Bigot  
 Scutellum with two or more normal apical bristles ..... *Lamprogaster* Macquart
38. Fore femur with numerous short stout bristles on the central portion of the postero-dorsal surface that are biseriate or triseriate centrally; antennae widely separated at bases, the flat facial carina at this point about half as wide as frons at vertex ..... *Notospila* Osten-Sacken  
 Fore femur with usually a single postero-dorsal series of longer bristles; antennae narrowly separated at bases, the carina at this point not nearly half as wide as frons at vertex ..... *Euprosopia* Macquart

*N.B.*—I have included several genera in the above key that do not belong in the New Guinea list. One or two of these are found in Australia, and are so marked in the key, and they have been dealt with by me in one or more of my papers on the Diptera of Australia that have appeared in these PROCEEDINGS. Two other genera were described by me from Samoa and, with the Australian genera, may be expected to occur in New Guinea. In a few other cases I have included genera that do not occur in New Guinea because I wanted to make clear their distinguishing characters or because the genus is new. Two concepts, *Ceratopelta* Bigot and *Notospila* Osten-Sacken, are also included, though I doubt their claim to generic status and include the first in my treatment of *Lamprogaster*, *Notospila* being considered merely a subgenus of *Euprosopia*.

#### LASIOXIRIA Hendel.

*Abhandl. Zool.-botan. Ges.*, viii, 1914, 28.

This is the only genus of Hendel's "Trapherina" in the New Guinea region. It is unknown to me and the description and figures suggest a close relationship with *Dasyortalis* Hendel, if not their synonymy.

#### LASIOXIRIA HIRSUTA Hendel.

*Op. cit.*, viii, 1914, 28.

Described from a male from Sattelberg, Huon Gulf, New Guinea. The only structural details available are shown in Hendel's figures; the description consists of merely colour characters.

## DASYORTALIS Hendel.

*Dasiortalis* Hendel, in de Meijere, *Nov. Guin.*, ix, livr. 3, 1913, 378; *Abhandl. Zool.-botan. Ges.*, viii, 1914, 277.

This genus is distinguished from its allies by the presence of dense short erect hairs on the eyes, the two pairs of fronto-orbital bristles, lack of short hairs on the upper surface of the stem vein of the wing at its base, the presence of setulae on the fifth vein along the extent of the posterior basal cell above, and in having the arista long-haired.

All the known species occur in New Guinea.

*Key to the Species.*

1. The dark apical costal streak on the wing is distinctly separated by a hyaline interval from the anterior outer extremity of the black fascia over the outer cross-vein; anal cell almost entirely hyaline; frontal and dorsal thoracic bristles and hairs fulvous-yellow in male, usually all these bristles and most of the dorsal hairs black in the female; fore femora normal in male ..... *complens* (Walker) .... 2
- The dark apical costal streak on the wing connected with the anterior outer extremity of the black fascia over the outer cross-vein ..... 4
2. The short dark linear streak on the costa at apex of the first vein not connected with the broad black fascia over the inner cross-vein, stopping at second vein; anal cell slightly browned below; no hyaline spot just beyond apex of anal cell; the yellow margin on upper edge of mesopleura linear ..... *complens* var. *separata*, n. var.
- The short dark linear streak on the costa at apex of the first vein connected with the anterior edge of the broad black fascia over the inner cross-vein at third vein; anal cell browned at apex and with the usual brown line along upper edge, not browned along lower margin ..... 3
3. Mesopleura with a very narrow yellow line on upper edge; a hyaline spot just beyond apex of anal cell ..... *complens* (Walker)
- Mesopleura with a broad yellow streak on upper edge that is about half as wide as long; no hyaline spot just beyond apex of anal cell ..... *complens* var. *fasciata* Curran
4. The short brown streak on the costa at apex of first vein connected with the outer edge of the broad black fascia over the inner cross-vein; seen from in front the head of the male is as high as wide, rounded in aspect, with the genae not angulate; tarsi entirely whitish-yellow ..... *angustifrons* Hendel
- The short brown streak at apex of the first vein not connected with the outer edge of the broad black fascia over the inner cross-vein; apices of tarsi dark .... 5
5. The two basal cells of the wing brown, with a hyaline spot near their apices; male with a clump of downwardly-directed bristles on the genae ....  *barbata* Hendel
- Both basal cells of the wing brown; male without genal group of bristles, but the genae angularly produced ..... *goniceps* Hendel

## DASYORTALIS COMPLENS (Walker). Pl. iv, figs. 1, 2.

*Journ. Proc. Linn. Soc. Lond.*, iii, 1859, 118 (*Ortalis*).—*Ortalis contigua* Walker, op. cit., viii, 1865, 123; Hendel, *Abhandl. Zool.-botan. Ges.*, viii, 1914, 277.

The legs are much more extensively lemon-yellow in the male than in the female, the latter having the femora and tibiae largely black. The palpi of the male are also white and almost disc-like, while in the female they are lemon-yellow and club-shaped.

There is some variation in the wing markings (Pl. iv, fig. 1) in a number of the specimens; the hyaline spot beyond the anal cell is sometimes very indistinct, and in one female the short curved brown streak proximad of the apex of the first vein connects with the fascia over the outer cross-vein on the third vein.

Recorded from New Guinea and Aru Islands. A large series from Wewak, New Guinea (F. H. Taylor), and two specimens from Papua: Kokoda, 1,200 feet and 3,000 feet (L. E. Cheesman).

## DASYORTALIS COMPLENS VAR. SEPARATA, n. var. Pl. iv, fig. 3.

This variety, which is very similar in all particulars to the typical form, may be distinguished by the failure of the short dark streak near the apex of the first vein to connect with the broad dark fascia over the inner cross-vein, and the pale brown margin of the anal cell along the anal vein (Pl. iv, fig. 3). Length, 4.5 mm.

Type, female, Dutch New Guinea: Cyclops Mts., Sabron, 930 feet, April 1936 (L. E. Cheesman).

## DASYORTALIS COMPLENS VAR. FASCIATA Curran.

*Proc. Cal. Acad. Sci.*, xxii, No. 1, 1936, 54 (*Lasiopsila*).

This variety differs from the typical form in having the yellow streak on the upper margin of the mesopleura widened behind, where it is almost half as wide as it is long, instead of uniformly wide and more than four times as long as wide. There is no hyaline spot just beyond the apex of the anal cell. Length, 4 mm.

Kavieng, New Ireland; Makada Is., off New Britain (F. H. Taylor); Solomon Islands (W. W. Froggatt). Type locality, Matema Island.

Curran described this as the type of a new genus, *Lastopsila*, which he placed in the family Psilidae. His description is lacking in several essential characters and his figure of the wing is slightly inaccurate, but I have no doubt as to the identity of the species.

## DASYORTALIS ANGUSTIFRONS Hendel.

*Abhandl. Zool.-botan. Ges.*, viii, 1914, 279.

Hendel states in his description that the hyaline fascia between the cross-veins of the wing does not attain the hind margin. In the well preserved male before me it does.

Described from a single male taken in New Guinea. Papua: Kokoda, August 1933 (L. E. Cheesman).

## DASYORTALIS BARBATA Hendel.

Op. cit., viii, 1914, 279.

Described from both sexes from New Guinea. Not known to me.

## DASYORTALIS GONICEPS Hendel.

Op. cit., viii, 1914, 281.

I have one male before me that apparently belongs to this species. Hendel makes no mention of an abnormal structure of the fore femur in this sex, but in this specimen the femur is swollen and slightly tumid at the apex, and there furnished with a clump of short erect black bristles.

Described from three males from New Guinea. Wewak, New Guinea (F. H. Taylor).

## CONICIPITHEA Hendel.

*Abhandl. Zool.-botan. Ges.*, viii, 1914, 29.

The head in my specimens is not particularly noticeable for its forward production at the base of the antennae, but the stiff short setulae on the outer edge of the third antennal segment are sufficient to identify the genus. These are not mentioned by Hendel in his description.

## CONICIPITHEA ADDENS (Walker).

*Dacus addens* Walker, *Jour. Proc. Linn. Soc. Lond.*, iv, 1860, 149.

Recorded from Celebes, Molucca, and Amboina, not as yet known from New Guinea, though likely to occur there. Introduced here because of that fact and to present the above character.

## PHILOCOMPUS Osten-Sacken.

*Bull. Ent. Soc. France*, x, 1881, 134.

This genus contains three species, none of which is as yet known to occur in New Guinea. One was described from Celebes and may be found in New Guinea.

## ANTINEURA Osten-Sacken.

*Op. cit.*, x, 1881, 134.

This genus has been divided into two subgenera as below:

- A. Inner cross-vein of the wing directly above the outer one, forming a continuous line ..... *Antineura* Osten-Sacken  
 AA. Inner cross-vein not directly above the outer one, curved and oblique .....  
 ..... *Adantineura* Hendel

*N.B.*—Neither of the two known species of *Antineura*, s.s., is known to occur in New Guinea; they are Malayan. The species of *Adantineura* are distinguished as below:

1. Wing without a longitudinal black streak from base of third vein to middle of discal cell below fork of radial vein; palpi red ..... *biroi* de Meijere  
 Wing with a longitudinal black streak from base of third vein to middle of discal cell below fork of radial vein; palpi red, black at bases ..... 2  
 2. Epistome shining metallic black ..... *kerteszi* de Meijere  
 Epistome yellow, thickly silvery-white-dusted ..... *grandis* Doleschall

## ANTINEURA (ADANTINEURA) BIROI de Meijere.

*Ann. Mus. Nat. Hung.*, iv, 1906, 188.

Described from a male from New Guinea. Not since recorded.

## ANTINEURA (ADANTINEURA) KERTÉSZI de Meijere. Pl. iv, fig. 4.

*Op. cit.*, iv, 1906, 189.

Described from both sexes from New Guinea. Both sexes, Wewak, New Guinea (F. H. Taylor).

## ANTINEURA (ADANTINEURA) GRANDIS (Doleschall).

*Natuurk. Tijdschr. v. Nederl.-Ind.*, xvii, 1858, 126 (*Herina*).

Described from a male taken on Amboina. May yet be taken in New Guinea.

## PSEUDOCLEITAMIA, n. gen.

*Generic characters.*—A remarkable genus in this subfamily, readily distinguished from any other by the very narrow upper portion of the frons, which has three or four pairs of short stout orbital bristles and four verticals. The head is otherwise much as in *Rivellia* and related genera, the face being almost vertical in profile, with shallow foveae on almost the entire height, the parafacials are narrow and have some fine short hairs; antennae as long as the face, the third segment about five times as long as its greatest width, narrowly rounded at apex; arista bare; upper occiput depressed, lower swollen. Thorax longer than wide, with the following bristles: 1 humeral, 2 notopleurals, 1 supra-alar, 2 postalars, a strong closely-placed pair of dorsocentrals, 1 mesopleural and four subequal scutellars. The unique feature of the thorax lies in the presence on the hind half of the mesopleura, the anterior half of the pteropleura, and the upper margin of the sternopleura of numerous short stout bristles. Wing as in Plate iv, Figure 5, the apices of first and second veins wide apart, inner cross-vein about its own length from outer, first posterior cell not narrowed at apex, vein closing the anal cell bent in middle, first and third veins setulose on upper surface. Squamae rather small, lower one a well developed lobe. Legs normal, rather stout.

Genotype, *Pseudocleitamia setigera*, n. sp.



PSEUDOCLEITAMIA SETIGERA, n. sp. Pl. iv, fig. 5.

♀. Black, rather dull, anterior margin of frons, basal two segments and base of third segment of antennae yellowish-brown, thorax pale-grey-dusted, but the type is damaged so that markings if any are not distinguishable. Wings hyaline, costa narrowly brownish-yellow from humeral cross-vein to apex of first vein, an oblique black fascia from below apex of the subcostal to midway to inner cross-vein over furcation of second and third veins, a narrow black fascia from apex of first vein to fifth enclosing the inner cross-vein, and a large black mark on apical two-fifths of the wing, the anterior outline of which is slightly rounded, touching the outer cross-vein, broken at apex by a wedge-shaped hyaline streak that extends from the tip of fourth vein obliquely to near the apex of second vein that leaves a narrow dark border from the apex of second to beyond the apex of third vein on the costal margin; edge of the anal region slightly brown clouded apically.

Frons at vertex about one-fifth of the head-width, slightly widened to anterior margin, where it is a little less than one-third the head-width and one-third its own length; orbits narrow, whitish-grey-dusted; eyes bare, slightly oblique, about 1.5 times as high as long; gena reddish-yellow, about one-fourth as high as eye. Prelabrum well exposed. The pairs of orbital bristles very close together and strong, though not very long. The type is damaged or rubbed so that their details are uncertain. Mesonotum with quite dense short depressed black hairs; scutellum with one or two fine erect discal hairs. Legs black, femora more brownish apically. Fore tarsi about 1.5 times as long as their tibiae, slightly thicker than usual, metatarsus on all legs longer than the other four segments combined; fore femora with sparse posteroventral bristles; mid tibia with two strong apical ventral bristles; hind tibia with a few inconspicuous central anteroventral setulae. Second wing-vein slightly undulated. Abdomen widest centrally, without long bristles at apex of fifth tergite. Length, 7.5 mm.

Type, Papua: Kokoda, 1,200 feet, May 1933 (L. E. Cheesman).

EUXESTOMOEIA Hendel.

Hendel in de Meijere, *Nova-Guinea*, ix, Zool., livr. 3, 1913, 377; *Gen. Ins.*, Fasc., 157, 1914, 91; *Abhandl. Zool.-botan. Ges.*, viii, 1914, 187.

There are three known species of this genus, all recorded from New Guinea. They are rather slender species, though placed by Hendel along with the stouter forms in his generic key. To prevent mistakes in allocation I have inserted the genus in both sections of the key to genera given herein.

The antennae are shorter than in *Scotinosoma* and the inner cross-vein is hardly more than its own length from the outer, the section of fourth vein between the cross-veins being not more than one-fifth as long as the preceding section. In both species I have before me the third antennal segment is distinctly angulate at apex above which is distinctive. There are striking differences in the chaetotaxy of the two species before me that are not mentioned by Hendel. I do not know what are the chaetotactic characters of *discifera*.

Key to the Species.

1. Mid and hind femora orange-yellow, remainder of legs deep black; thorax, scutellum and abdomen glossy metallic-blue, without trace of dusting; no bristles on the mesonotum proximad of the strong acrostichal pair; the 6 scutellar bristles sub-equal in length, all on margin; arista short-haired, the longest hairs about 3 times as long as its basal diameter; the large apical brown mark on the wing narrowly connected with the fascia over the cross-veins on both the costa and hind margin ..... *bipunctata* Hendel
- Legs entirely black, or black-brown; thorax with greyish dust; aristae pubescent basally ..... 2

2. Apical brown mark on the wing entire; mesonotum with a pair of strong bristles proximad of the prescutellar acrostichals and more widely separated than the latter; intermediate pair of scutellar bristles much shorter than the others, and subdorsal in position; no apical palette on arista of the male ..... *prompta* (Walker)  
 Apical brown mark on the wing interrupted by hyaline streaks in the cells; arista of male with an apical palette ..... *discifera* de Meijere

EUXESTOMOEA BIPUNCTATA Hendel. Pl. iv, fig. 6.

*Abhandl. Zool.-botan. Ges.*, viii, 1914, 188.

The only specimen before me does not have the brown fascia from the stigma extending entirely to the hind margin of the wing as described by Hendel; it is broken above the fifth vein and the continuation below that vein to its fusion with the second fascia is faint (Pl. iv, fig. 6). The post-vertical pair of bristles is practically undeveloped. Halteres with yellow knobs.

Originally described from New Guinea: Maroka. One female, Papua: Mafulu, 4,000 feet, January 1934 (L. E. Cheesman).

EUXESTOMOEA PROMPTA (Walker).

*Jour. Proc. Linn. Soc. Lond.*, iii, 1859, 118 (*Ortalis*).

A much duller coloured species than the preceding, with better developed post-vertical pair of bristles and brown halteres.

Recorded from New Guinea and Aru. Five specimens, Papua: Mafulu, 4,000 feet, December 1933, and Kokoda, 1,200 feet, December 1933 (L. E. Cheesman).

EUXESTOMOEA DISCIFERA de Meijere.

*Nov. Guin.*, ix, Zool., livr. 3, 1913, 377.

Described from a poorly preserved male from New Guinea. As in *prompta* the bases of the abdominal tergites are whitish-grey-dusted, but in this species the bands are broader, about half the length of the tergites, and in the male there is an apical palette on the arista.

RHYTIDORTALIS Hendel.

*Abhandl. Zool.-botan. Ges.*, viii, 1914, 121.

This genus belongs to the same group as *Pseudepicausta*, having the first posterior cell of the wing not narrowed at the apex, but is separated from its nearest allies by the presence of rather coarse punctures on the frons.

Neither of the two known species occurs, as far as known, in New Guinea, but the Australian *rugifrons* Thomson may yet be found there; the other species is Formosan.

CLETTAMOIDES, n. gen.

*Generic characters.*—Similar to *Cleitamia* in most particulars, but differing markedly in having the second wing-vein much closer to the first on apical third or more of the latter than it is to third, and the orbits without strong bristles. There is also, in all three known species, a thickened strip on the wing membrane near the apex of the first vein that runs to the third vein. There is a striking uniformity in the wing markings of the included species, all having a basal brown or yellowish mark that extends to level of apex of the subcostal vein and to fourth vein across the field, and beyond this a large rather rounded blackish-brown mark from the costa to the hind margin that covers both the cross-veins.

Genotype, *Cleitamia kerteszi* Hendel.

*Key to the Species.*

1. No black streak emanating from the costal edge of the large brown mark over the cross-veins ..... *liturata* (Walker)
- A black or dark brown streak emanating from the costal edge of the large brown mark over the cross-veins and extending narrowly round the costal margin to apex of the fourth vein ..... 2
2. The basal brown mark on the wing not extending to the costa at apex ..... *kerteszi* Hendel
- The basal brown mark extending to the costa on a large part of its apical half ..... *latifascia* (Walker)

## CLEITAMOIDES LITURATA (Walker).

*Jour. Proc. Linn. Soc. Lond.*, v, 1861, 251 (*Dacus*).

Originally described from Dorey, and subsequently recorded from New Guinea.

## CLEITAMOIDES KERTESZI Hendel.

*Abhandl. Zool.-botan. Ges.*, viii, 1914, 130.—*Cleitamia liturata* Osten-Sacken, *Ann. Mus. Civ. Genov.*, xvi, 1881, 468; op. cit., (2) xix (xxxix), 1899, 559.

Described from New Guinea and known only from the original material.

## CLEITAMOIDES LATIFASCIA (Walker). Pl. iv, fig. 7.

*Jour. Proc. Linn. Soc. Lond.*, iii, 1859, 114 (*Dacus*); Edwards, *Trans. Zool. Soc. Lond.*, xx, pt. 13, 1915, 415.

Originally described from Aru Islands and subsequently recorded from Dutch New Guinea by Edwards. Papua: Kokoda, 1,200 feet, April, September and October 1933 (L. E. Cheesman). (Pl. iv, fig. 7.)

## CLEITAMIA Macquart.

*Suites à Buffon*, Diptères, ii, 1835, 440.

This genus, the species of which are usually distinguished by the conspicuously black-marked wings with hyaline streaks or spots, is very well represented in New Guinea and below I present a key to the species referable to it, some of which are known to me only from descriptions. Hendel in his paper on Platystominae (*Abhandl. Zool.-botan. Ges.*, viii, 1914, 123) presented a key to 14 species, which list is considerably enlarged herein.

*Key to the Species.*

1. Scutellum with four marginal bristles, the basal pair sometimes weak and hair-like ..... 2
- Scutellum with six strong marginal bristles; fourth wing-vein beyond the outer cross-vein usually markedly upwardly curved to before middle of apical section, then sloping down to wing-margin ..... 12
2. Wing brownish-black, with three wedge-shaped hyaline streaks on the costa, one before the apex of the subcostal vein that extends over the wing to second vein near its furcation with third, two others between apex of subcostal vein and that of first vein that extend backward over third vein, three hyaline streaks on apical half, the anterior one extending diagonally from below the apex of second vein to apex of the first posterior cell, the central one extending from behind middle of the inner cross-vein to and including most of apical half of second posterior cell, and the third extending from the lower half to inner cross-vein over the discal cell to the hind margin of wing, angulate on fifth vein, and a hyaline streak along the anal margin to apex of fifth vein ..... *catharinae* de Meijere\*
- Wing not as largely black, and differently marked ..... 3

\* In 1915 (*Tijdschr. v. Ent.*, lviii, 129) de Meijere placed this species as a synonym of *tricurvata* Walker, but there does not appear to be a great similarity in the descriptions and I leave the matter as presented in the above key until a comparison of the types is made.

3. Both the cross-veins of the wing enclosed in a large broad black mark or spot . . . 4  
 Both the cross-veins of the wing not enclosed in a single large black mark or spot, or covered by a linear black streak . . . . . 9
4. The large black spot over the cross-veins extending over the entire width of wing from the costa to the hind margin . . . . . *amabilis* Osten-Sacken  
 The above black spot or mark not reaching the costal margin or only so as a mere line . . . . . 5
5. No black streak emanating from the apical border of the large discal spot, the only dark mark beyond it consisting of a narrow costal streak that is not connected with the large spot . . . . . 6  
 At least one dark streak emanating from the apical border of the large discal spot . . . . . 7
6. Pleura fulvous-yellow on hind margin of the mesopleura and all of the sternopleura; mesonotum with a rather broad pale-grey-dusted central vitta from anterior margin to the suture; no hyaline spot in the dark mark over the cross-veins, and a wedge-shaped hyaline mark above apical part of the anal vein . . . . .  
 . . . . . *similis* Kertész  
 Pleura entirely metallic violet-blue; no grey-dusted central anterior vitta on the mesonotum; a small hyaline spot behind the lower extremity of the outer cross-vein, and the entire posterior half of the cell in front of the apical section of anal vein whitish-hyaline . . . . . *cheesmanae*, n. sp.
7. Only one arcuate black streak emanating from the apical border of the large discal spot . . . . . *biarcuata* Walker  
 Two arcuate black streaks emanating from the apical border of the large discal spot . . . . . 8
8. Frons in both sexes broader than long; basal halves of the femora yellow; anal cell of the wing with a small sub-hyaline spot; lower occiput yellow on sides . . . . .  
 . . . . . *astrolabei* Boisduval  
 Frons longer than broad; basal two-thirds of femora yellow; anal cell of the wing with only the upper and apical margins blackened; entire occiput metallic blue-black . . . . . *orthocephala* Hendel
9. First posterior cell of the wing without a dark fascia; third vein beyond the inner cross-vein evenly and but slightly arcuate, almost parallel with the apical section of fourth; a slender curved fascia over the outer cross-vein from costa to hind margin . . . . . *rivelloides* Osten-Sacken  
 In addition to the dark costal band there is a dark fascia or short streak through the first posterior cell of the wing . . . . . 10
10. The oblique dark fascia through the first posterior cell is not connected with the dark costal streak, the one over the cross-vein narrow, curved forward in front . . . 11  
 The oblique dark fascia through the first posterior cell is connected with the costal streak; outer cross-vein in a large black mark that occupies a large portion of the second posterior cell . . . . . *tricurvata* Walker
11. The oblique dark streak in the first posterior cell dark brown at apex of fourth vein, becoming gradually paler from there to its anterior extremity, which is pale brown and distinctly widened . . . . . *ostensackeni* Hendel  
 The oblique dark streak in the first posterior cell entirely deep black, narrow, of uniform width, not widened at anterior extremity . . . . . *cyclops*, n. sp.
12. A large black mark enclosing both the cross-veins of the wing, that does not touch the narrow black costal streak, from the upper edge of which spot emanates a slender curved black streak that extends downward to the apex of the fourth vein . . . . . 12a  
 Wing not so marked, the spot enclosing the cross-veins either reaching costa or a short brown streak over apex of the fourth vein that is not connected with the dark mark enclosing the cross-veins, the latter mark not entirely black . . . 13
- 12a. The large black mark enclosing the cross-veins extending to the costa, connected with the narrow costal stripe that extends to apex of third vein, but not with the one that runs obliquely over apex of fourth vein (Pl. iv, fig. 12) . . . . .  
 . . . . . *delandi*, n. sp.  
 The large black mark enclosing the cross-veins not extending to the costa, and connected with the narrow black stripe that ends on apex of fourth vein . . . . .  
 . . . . . *excepta*, n. sp.

13. Basal and discal cells brown, partly yellowish apically; the costal margin of wing with three hyaline spots that do not extend over the second vein .....  
 ..... *gestroi* Kertész  
 Basal and discal cells not entirely brown; an oblique hyaline fascia from costa or near it to the fifth vein beyond middle of the discal cell; costal margin with but one hyaline mark on or near costa on its basal half ..... 14
14. A wedge-shaped hyaline mark on the costa before middle of wing that extends to third vein; the hyaline central fascia attaining the costal margin .....  
 ..... *roederi* Kertész  
 Only a small hyaline spot between first and second veins before middle of wing; the hyaline central fascia not attaining the costal margin ... *insignis* de Meijere

## CLEITAMIA AMABILIS Osten-Sacken.

*Ann. Mus. Civ. Stor. Nat. Gen.*, xvi, 1881, 468.

Described from New Guinea.

The large oval dark mark over the cross-veins extends from the costa to the hind margin and has a single slender apical costal marginal streak extending from its costal edge to midway between the apices of third and fourth veins. There is a complete hyaline fascia in front of the large oval mark. There are two hyaline costal marks in the basal half of the wing.

## CLEITAMIA ASTROLABEI Boisduval. Pl. iv, fig. 8.

*Voy. l'Astrolabe*, pt. 2, 1835, 668 (*Ortalis*).—*Poticara triarcuata* Walker, *Jour. Proc. Linn. Soc. Lond.*, v, 1861, 249.

This species has been recorded from several localities in New Guinea. The head of the male varies considerably in width and is always distinctly wider than that of the female, noticeably exceeding in width the widest part of the thorax.

New Guinea: Bulolo (F. H. Taylor), Marprik (C. M. Deland and J. R. Rigby); Papua: Kokoda, 1,200 feet, July 1933 (L. E. Cheesman), Koitaki (E. O. Pockley); Dutch New Guinea: Cyclops Mts., 930 feet, Sabron, April 1936, Lake Sentani, August 1936, 58 specimens (L. E. Cheesman).

## CLEITAMIA ORTHOCEPHALA Hendel.

*Abhandl. Zool.-botan. Ges.*, viii, 1914, 126.

Very closely allied to *astrolabei*, differing essentially from the latter as noted in the foregoing key. Unknown to me except from the description and known only from New Guinea.

## CLEITAMIA SIMILIS Kertész.

*Ann. Mus. Civ. Stor. Nat. Gen.*, (2) xix (xxxix), 1899, 562.

Described from New Guinea. Papua: Mafulu, 4,000 feet, January 1934 (L. E. Cheesman).

## CLEITAMIA OSTENSACKENI Kertész.

*Term. Füzet.*, xxi, 1898, 494.

Type locality, Madang (Frederich Wilhelm Hafén), New Guinea.

## CLEITAMIA TRICURVATA (Walker).

*Jour. Proc. Linn. Soc. Lond.*, vii, 1864, 227 (*Poticara*).

Described from Waigou Island, New Guinea. Recorded from New Guinea by Enderlein in 1924.

## CLEITAMIA GESTROI Kertész.

*Ann. Mus. Civ. Stor. Nat. Gen.*, (2) xix (xxxix), 1899, 566.

In this species and *roederi* the fourth wing-vein is highly arched beyond the outer cross-vein.

Originally described from New Guinea.

## CLEITAMIA ROEDERI Kertész.

Op. cit., (2) xix (xxxix), 1899, 565.

Described from New Guinea.

## CLEITAMIA INSIGNIS de Meijere.

*Tijdschr. v. Ent.*, lviii, 1915, 128.

A large, robust species, with a peculiar wing-pattern, the small quadrate hyaline spot near the middle of the marginal cell, the central hyaline fascia which does not attain either the costa or the hind margin and lies near the apex of the discal cell, and the broad costal streak from the large dark mark enclosing the cross-veins extending well over the third vein, its lower edge being at middle of the tip of first posterior cell, are distinctive. The third wing-vein is conspicuously humped up just beyond the outer cross-vein.

Described from North New Guinea. One pair, West New Guinea; Njau-limon, south of Mt. Bougainville, 300 feet, February 1936 (L. E. Cheesman).

## CLEITAMIA BIARCUATA (Walker).

*Jour. Proc. Linn. Soc. Lond.*, viii, 1865, 133 (*Poticara*).

This species is readily distinguished from *astrolabei* and its allies by the character of the wing markings as noted in the foregoing key to the species.

Originally described from the island of Salawati and subsequently recorded from New Guinea by Hendel.

## CLEITAMIA RIVELLOIDES Osten-Sacken.

*Ann. Mus. Civ. Stor. Nat. Gen.*, xvi, 1881, 469.

Originally described from New Guinea, the female type being in Genoa. Not subsequently recorded.

## CLEITAMIA CYCLOPS, n. sp. Pl. iv, fig. 9.

♀. Similar to *ostensackeni* in general colour and markings, differing as follows: Frons brownish-black to black, with a velvety mark on each side in front, sometimes red in centre; third antennal segment dark brown; palpi dark at bases; face violet-black; mesonotum blue-black, slightly grey-dusted on disc, with three rather faint broad brownish vittae, the sublaterals obsolete before suture; abdomen entirely violet-black, with rather dense, very short, yellowish pile; the black fasciae on the wing much narrower, almost linear, the one over the cross-veins hardly widened behind, and the one in the first posterior cell as described in the foregoing key to the species (Pl. iv, fig. 9).

All four vertical bristles and the pair of orbital bristles strong. Scutellars four. Fore femora almost entirely black. Cross-veins of the wing almost interstitial. Halteres black. Length, 8-10 mm.

Type and 2 paratypes, Dutch New Guinea: Cyclops Mts., 3,500 feet, March 1936 (L. E. Cheesman).

## CLEITAMIA CHEESMANAE, n. sp. Pl. iv, fig. 10.

♀. Similar to *similis*, differing as stated in the foregoing key to the species, and as follows: The frons is narrower and not so noticeably widened in front, the undusted lower half of the face is not green but is purple in colour, and the wing has but one hyaline wedge-shaped costal mark in front of the semi-circular hyaline fascia (Pl. iv, fig. 10).

The type-specimen has 5 scutellar bristles, but I assume that the normal number will be found to be 4, as the similarity to *similis* is very striking and the two are closely allied. Length, 9 mm.

Type, Dutch New Guinea: Cyclops Mts., 3,500 feet, March 1936 (L. E. Cheesman). Named in honour of the collector.

CLEITAMIA EXCEPTA, n. sp. Pl. iv, fig. 11.

♀. This species resembles *astrolabei* in general colour and markings, but has 6 scutellar bristles. The head is narrower than in that species, with the frons about 1.5 times as long as wide, red in colour, with the upper orbits and the ocellar triangle blue-green, the narrow eyes in front white-dusted, and the anterior margin hardly darkened. The mesonotum is greenish or bluish-black, with slight grey dusting and traces of brown discal vittae, but no transverse black band at the suture. Pleura largely yellowish-brown. Legs with the femora more extensively yellow. Wing with the same large broad black mark enclosing the cross-veins and the narrow black costal margin beyond it, but there is only one slender curved streak emanating from upper apical margin of the large mark, ending on apex of fourth vein, and but one hyaline wedge-shaped mark on the costa before middle; the anal cell is almost entirely hyaline, and the posterior edge of the black mark beyond the anal cell is not as markedly dentate. Length, 8-9 mm.

Type and 9 paratypes, West New Guinea: 7 from Njau-limon, 300 feet, and 2 from Mt. Nomo, 700 feet, February 1936 (L. E. Cheesman).

Types of all three new species in the collection of the British Museum (Nat. Hist.), London.

CLEITAMIA DELANDI, n. sp. Pl. iv, fig. 12.

♀. Head black, frons almost imperceptibly brownish above, much darker than in *excepta*, the upper orbits glossy blue-black, the lateral edges narrowly silvery in front; vertex with four bristles, one pair of orbitals rather strong. Frons about 1.5 times as long as wide. Face vertical, dull red, edges of foveae and parafacials glossy-black, foveae white-dusted. Genae a little higher than width of third antennal segment, the latter extending to a little below middle of face. Antennae red; longest hairs on arista about as long as width of third antennal segment; palpi slender, brownish-red.

Thorax black, rather brown at sutures, mesonotum dull centrally, metallic blue-black on sides, the scutellum and pleura blue-black or metallic-blue. Some whitish dust at the humeri and at suture laterally, most evident from behind, no trace of markings. Scutellum with six bristles, the disc microscopically fine-haired. Legs brownish-yellow, tibiae darkened apically, tarsi black. Wing black-brown, paler brown in the costal and subcostal cells, with the following parts whitish hyaline: Two wedge-shaped marks beyond the apex of the subcostal vein, the first one extending to almost the fourth vein, an inverted V-shaped mark at apex, its base near costa, its outer arm ending in apex of first posterior cell, its inner in upper half of second posterior cell, a short streak beyond middle of the discal cell extending from near anterior edge of latter to hind margin of the wing, and a broad stripe along the anal angle that extends almost across the anal cell (Pl. iv, fig. 12). Halteres dark brown. Abdomen metallic-blue, without the usual apical bristles in type. Length, 11 mm.

Type, New Guinea: Marprik (J. R. Rigby and C. M. Deland). Type in the collection of the School of Public Health and Tropical Medicine, University of Sydney.

## CLEITAMIA TRIGONALIS de Meijere.

*Nov. Guin.*, ix, Zool., livr. 3, 1913, 375.

This species which was described from New Guinea is entirely unknown to me. It is similar to *liturata*, but has entirely yellow femora and different wing markings.

## LAGLAISIA Bigot.

*Ann. Soc. Ent. France*, (5) x, 1880, 92.

The males of this genus have the head much widened, the eyes being usually on very long stalks, the width sometimes exceeding the entire length of the insect, but in the females the head is not markedly wider than the thorax. The anal cell is closed by a centrally outwardly-bent cross-vein, and the apex of the abdomen in the males has a few quite long bristles much as in *Cleitamia*.

Hendel published, in his 1914 paper, a key to the then known species which I reproduce below for the convenience of students of the group.

## Key to the Species.

1. Body entirely reddish-brown ..... 2  
Metallic coloured species, at least the postnotum and the abdomen blackish-green .. 3
2. Inner cross-vein not longer than the section of the fourth vein between the cross-veins; the outer cross-vein only enclosed within a brown mark that extends narrowly along the hind margin of the wing from near the anal angle in a curve to the middle of the submarginal cell at wing tip, widening apically .....  
..... *kochi* de Meijere  
Inner cross-vein longer than the section of the fourth vein between the cross-veins; wings brownish, a transverse whitish-hyaline streak from behind the fifth vein to the third vein just proximad of the cross-veins in front of a large dark brown mark over both cross-veins that encloses a small hyaline central spot, the wing tip hyaline ..... *caloptera* Bigot
3. Thorax and scutellum blue-black, metallic; first and second posterior cells of wing with a brown cross-band; wing with two narrow white cross-bands in the middle ..... *fascipennis* de Meijere  
Thorax and scutellum reddish-brown, mesonotum with metallic-blue discal mark, the scutellum with a violet sheen; first and second posterior cells of the wing without a brown cross-band; wing with but one wedge-shaped hyaline cross-band in the middle that extends from the costa to fifth vein just proximad of the cross-veins, a narrow brown cross-band over the latter and a continuation of same on the apical margin of the costa to the middle of first posterior cell ....  
..... *biroi* Hendel

## LAGLAISIA CALOPTERA Bigot.

*Ann. Soc. Ent. France*, (5) x, 1880, 92.

Described from New Guinea.

## LAGLAISIA KOCHI de Meijere.

*Tijdschr. v. Ent.*, II, 1903, 120.

Described from New Guinea.

## LAGLAISIA BIROI Hendel.

*Abhandl. Zool.-botan. Ges.*, viii, 1914, 136.

Described from New Guinea.

## LAGLAISIA FASCIPENNIS de Meijere.

Hendel, *Abhandl. Zool.-botan. Ges.*, viii, 1914, 134; de Meijere, *Tijds. v. Ent.*, lviii, 1915, 134.

It is rather difficult to determine who should be credited with this species. Hendel included it in his key to the species as *fascipennis* de Meij. in litt., but he



did not state whether the data given by him were to be credited to de Meijere, whose description of the species did not appear until about a year later. Hendel had not seen the species apparently and simply included it to make his paper complete to date. I therefore credit the species to de Meijere.

Northern New Guinea.

LAGLAISIA STYLOPS Enderlein.

*Mitt. Zool. Mus. Berl.*, xi, 1923, 116.

This species apparently belongs in the group in which the thorax and abdomen are reddish-brown, but the posterior notopleural elevation is described as greenish-metallic. The wing is compared by Enderlein with that of *biroi* with the distinctions that there is no hyaline spot in the cell R, the wedge-shaped hyaline fascia from the costa near middle is narrower and does not reach  $Cu_1$ , and the hyaline band at the wing tip does not penetrate the cell  $R_{2+3}$ , but ends in  $R_{4+5}$ .

North-east New Guinea.

LAGLAISIA TELESCOPICA Enderlein.

*Op. cit.*, xi, 1923, 116.

Another closely allied species of the same colour group, differing from all the others in the markings of the wings.

North-east New Guinea.

LORIOMYIA Kertész.

*Ann. Mus. Civ. Stor. Nat. Gen.*, (2) xix (xxxix), 1899, 567.

LORIOMYIA GUTTIPENNIS Kertész.

*Op. cit.*, (2) xix (xxxix), 1899, 567.

This is the only species of the genus and was described from New Guinea. It is unknown to me.

PLAGIOSTENOPTERINA Hendel.

*Abhandl. Zool.-botan. Ges.*, viii, 1914, 52; Malloch, *Proc. U.S. Nat. Mus.*, lxxviii, art. 15, 1931, 12.

In the paper cited above I redefined this genus, segregating four subgenera, and using new characters for its separation from *Elassogaster*. There are none of the previously described subgenera except the typical one in the New Guinea material before me, so I have used only the characters of it in my synoptic key to the genera herein.

In all the species of this subgenus and in the new one dealt with below, there are some fine hairs on the face visible with a magnification of 32 diameters.

I present below a key to the species in the present collection and include one other not represented in it.

*Key to the Species.*

1. Scutellum with many piliferous punctures on the entire dorsal surface besides the four marginal bristles ..... 2
- Scutellum without piliferous punctures on dorsum, with only the four marginal bristles ..... 3
2. Male with an apical palette on the arista; fourth (third visible) abdominal tergite about 1.5 times as long as fifth in male; ocellar triangle rather elongate and narrow, quite distinctly grey-dusted or tomentose; outer cross-vein of the wing very narrowly and faintly brown-clouded ..... *aenea* Wiedemann
- Male without an apical palette on the arista; fourth abdominal tergite of male shorter than fifth; ocellar triangle wider and not distinctly grey-dusted in front of the ocelli; outer cross-vein not at all brown-clouded ..... *enderleini* Hendel

3. Humeral bristle weak or lacking; legs black; outer cross-vein of the wing not noticeably brown-clouded ..... *parva* Malloch  
 Humeral bristle long and strong; legs largely orange-yellow; outer cross-vein of the wing broadly clouded with dark brown ..... *orbitalis*, n. sp.

PLAGIOSTENOPTERINA (PLAGIOSTENOPTERINA) AENEA Wiedemann.

Pl. iv, fig. 13.

*Zool. Mag.*, i (3), 1819, 29 (*Dacus*).

A common species of quite wide distribution, occurring throughout the Malayan region and southward to New Guinea and Australia.

The female is difficult to distinguish from that of *enderleini*, but the male is readily separated by the apical arisal palette.

A series of specimens from Wewak, New Guinea (F. H. Taylor), Keravat, Rabaul, New Britain (F. H. Taylor), and another from Dutch New Guinea: Cyclops Mts., Sabron, 900 feet, May 1936 (L. E. Cheesman).

PLAGIOSTENOPTERINA (PLAGIOSTENOPTERINA) ENDERLEINI Hendel.

Pl. iv, fig. 14.

*Abhandl. Zool.-botan. Ges.*, viii, 1914, 56.—*Stenopterina aenea* Enderlein, *Zool. Jahrb.*, 1912, 356.

Apparently not as common as the genotype. Occurs in the Malayan region. There are 2 specimens from Bulolo, 2 from Bulowat (F. H. Taylor), and one specimen from Marprik (J. R. Rigby and C. M. Deland), New Guinea, and 3 from Papua: Kokoda, 1,200 feet, April and August 1933 (L. E. Cheesman), in this collection.

PLAGIOSTENOPTERINA (PLAGIOSTENOPTERINA) PARVA Malloch.

*Proc. U.S. Nat. Mus.*, lxxviii, art. 15, 1931, 15.

I have seen only the type specimen, from north-east New Guinea (Kaiser Wilhelmsland), which is in the collection of the Deutsches Entomologisches Institut, Berlin-Dahlem.

PLAGIOSTENOPTERINA (STENOPTEROSOMA) ORBITALIS, n. sp. Pl. iv, fig. 15.

This new subgenus is distinguished from its allies by the presence of two pairs of very small fine upper orbital bristles on the frons, a fine short pair of divergent ocellars, and the lack of any hairs on the lower part of the sides of the postnotum.

♂, ♀. Head black, lower portion of face laterally yellowish-brown, frons shiny, glossy on ocellar region, vertex and upper orbits, with a narrow silvery-white-dusted line on each side to orbits; face white-dusted on upper half, and in the foveae, the parafacials also white-dusted; antennae fulvous-yellow, third segment dark on upper edge; aristaefuscous. Frons parallel-sided, fully 1.5 times as long as wide and a little more than one-third of the head-width, slightly bulged up in centre in front, and with many short pale fine surface hairs; all four vertical bristles long and strong; postvertical bristles lacking; postocular bristle moderately long. Face concave in profile, the epistome slightly projecting, gena about one-seventh as high as the eye, genal bristle strong. Facial foveae deep, edges of the central carina rounded. Antennae not extending fully to lower level of eyes, third segment four times as wide as long, the upper apex slightly angulate, lower one rounded; aristaef short-haired on less than the basal half, that of male without an apical palette; palpi moderately wide.

Thorax shiny black, with a bluish or bronzy tinge, most noticeable on mesonotum, with grey or yellowish dust, palest on lateral edges of mesonotum and

on pleura, that on the former forming a wide central vitta, narrowed in front where it is also palest, pleura most densely dusted below anterior spiracle, on a wide central fascia, and on the pleurotergite. Hairs dark, bristles black. Bristles as follows: 1 humeral, 2 notopleurals, 2 postalars, one supra-alar, and a weaker pair of dorsocentrals; mesopleural bristle strong. Scutellum as mesonotum, slightly granulose, with four strong marginal bristles and no hairs except one in front of each of the anterior bristles. Legs black, fore femora almost entirely, and mid and hind femora except their apical third or less, fulvous-yellow. Fore femur with a series of posteroventral bristles, mid tibia with a long apical ventral bristle, hind tibia with a series of short setulae on the central portion of the anteroventral surface.

Wings greyish-hyaline, brown on costal margin from apex of the subcostal vein to apex of fourth or slightly beyond it, darkest in the subcostal cell and widest at apex, the costal cell and a stripe along the hind margin of the apical half of the dark border yellow; a brown streak fills the entire anterior basal cell, extends along the fourth vein to outer cross-vein and expands broadly but less intensely backward to enclose the outer cross-vein. Inner cross-vein a little beyond middle of discal cell, veins 3 and 4 slightly convergent at apices. Halteres yellow. Abdomen coloured as thorax but more distinctly blue and without dusting, the sides at apex of the composite tergite yellowish. Length: 5-6 mm.

Type, male, allotype, and 5 paratypes, Papua: Kokoda, 1,200 feet, April, May and Sept.-Oct. 1933 (L. E. Cheesman).

#### ELASSOGASTER Bigot.

*Ann. Soc. Ent. France*, 1859, 546.

Very similar to *Plagiostenopterina*, differing in the lack of hairs on the face, the more nearly erect inner cross-vein of the wing, and the almost straight apical section of third wing-vein.

Of the 18 known species, only 3 are reliably reported from New Guinea.

#### Key to the New Guinea Species.

1. Wing without dark cloud on either or both cross-veins ..... 2  
Wing with a dark cloud on either or both cross-veins ..... 3
2. No white-dusted vitta on the mesonotum; scutellum convex, with rounded outline and four strong bristles, the disc with numerous decumbent fine hairs .....  
..... *evitta*, n. sp.  
A white-dusted vitta on centre of the mesonotum; scutellum slightly flattened, not regularly rounded in outline, with a pair of short hairs near base, a moderate-sized pair of bristles at middle of sides, and a long pair at apex, the surface otherwise bare ..... 4
3. Wing with a narrow dark costal streak at apex beyond the tip of second vein that is diffuse posteriorly; legs honey-yellow, the fore tibiae and tarsi deep black ....  
..... *terraereginae* Malloch  
Wing with a large black spot at apex extending back from a little beyond the apex of the second vein to the fourth vein and filling apices of submarginal and first posterior cells; legs largely black, rather variable, but the fore tibiae and tarsi and the mid and hind femora and tibiae always black ..... *sepsoides* (Walker)
4. Both the cross-veins of the wing with very large round brown spots; posterior basal cell only one-third as long as the discal cell ..... *didymus* Osten-Sacken  
Both the cross-veins of the wing merely broadly brown-clouded; posterior basal cell of the wing half as long as the discal cell ..... *didymoides* Osten-Sacken

#### ELASSOGASTER SEPSOIDES (Walker).

*Jour. Proc. Linn. Soc. Lond.*, vol. 5, 1861, 163 (*Dacus*).—*Cephalia bicolor* Bigot, *Ann. Soc. Ent. France*, 1886, 335.—\**Stenopterina unimaculata* Kertész, *Term. Füz.*, xxii, 1899, 185.

\* Cited as *S. immaculatus* by Hendel, *Abhandl. Zool.-botan. Ges.*, viii, 1914, 82.

A common species throughout the Malayan region, extending southward to Australia. Wewak and Bulwa, New Guinea (F. H. Taylor); Rabaul, New Britain (F. H. Taylor).

ELASSOGASTER EVITTA, n. sp. Pl. iv, fig. 16.

♂, ♀. A metallic blue-black species, with slight dusting on the sides, but no central white-dusted vitta on the mesonotum.

Head black, jowls behind and the vibrissal angles brownish-yellow, face brown, lateral edges of frons with a silvery-white-dusted line, the frons shiny. Antennae reddish-yellow, palpi brown. Frons almost parallel-sided, about 1.5 times as long as wide and one-third as wide as head, short-haired, all four vertical bristles long and strong, each orbit with a microscopic pair of upper setulae and a pair of similar ocellars present. Aristae subnude, third antennal segment about 3.5 times as long as its basal width, narrowly rounded at apex. Face concave in profile, the foveae deep.

Thorax with the dorsum closely and finely piliferous punctate, the pile and bristles black. Bristles as follows: 1 humeral, 2 notopleurals, 1 supra-alar, 2 post-alars, and a pair of strong dorsocentrals, the mesopleural strong. Scutellum convex and evenly rounded in outline, the disc with many decumbent black hairs, the surface not as noticeably punctate as the mesonotum; four strong marginal bristles. Legs brownish-black, tibiae and fore tarsi darker, bases of fore and hind femora, and bases of mid and hind tarsi reddish-yellow. Fore femora with postero-ventral series of bristles; mid tibia with one strong apical ventral spur. Wings greyish-hyaline, stigma blackish-brown, and a diffuse brown mark at apex beyond tip of second vein and extending to tip of fourth, darkest over the apex of the third vein. Stigma as long as the next two costal sections combined, the latter subequal in length; inner cross-vein close to middle of the discal cell and almost erect; apex of second vein rounded forward to the costal vein, that of third vein slightly downwardly sloped. Halteres yellow.

Abdomen elongate, almost parallel-sided in the male and in that sex noticeably compressed, the abdomen of female more ovate. Fifth tergite of male as long as or longer than third and fourth combined. Length, 5-6 mm.

Type, male, and allotype, Makada Is., off New Britain (F. H. Taylor).

ELASSOGASTER TERRAEREGINAE Malloch.

PROC. LINN. SOC. N.S.W., liii, 1928, 352.

This Australian species may yet be found in New Guinea.

ELASSOGASTER DIDYMUS (Osten-Sacken).

*Stenopterina didyma* Osten-Sacken, *Ann. Mus. Civ. Stor. Nat. Genov.*, xvi, 1881, 465; Hendel, *Abhandl. Zool.-botan. Ges.*, viii, 1914, 75.

I am free to confess that I am slightly doubtful about the status of this and the next species, though this may be due to my not having specimens of the latter. The specimens before me do not exactly agree with Osten-Sacken's description and figure in that the femora are almost entirely greenish-black, only the extreme apices being reddish, and the second wing-vein does not bend as abruptly forward at its tip. The posterior basal cell of the wing is however a little more than one-third as long as the discal cell and not half as long as it is called for by Hendel's description of his species. I accept the specimens before me as *didymus*.

Originally described from New Guinea. Papua: 1 specimen, Mafulu, 4,000 feet, January 1934; 4 specimens, Mondo, 5,000 feet, February 1934 (L. E. Cheesman); 1 specimen, New Guinea: Marprik (J. R. Rigby and C. M. Deland).

## ELASSOGASTER DIDYMOIDES Hendel.

Op. cit., viii, 1914, 76.

Originally described from Madang (Frederich-Wilhelmshafen), New Guinea, and not known to me nor since recorded. See remarks above.

## SCOTINOSOMA Loew.

Mon. N. Amer. Dipt., iii, 1873, 45.

This genus is very closely related to *Pseudepicausta* Hendel and I have had to redefine it on the basis of the characters of the genotype. I find that in the two Australian species I previously described as belonging to *Pseudepicausta* and in the genotype there are two pairs of fronto-orbital bristles present, which is not the case in that genus, or at least in the genotype, and in the latter the mid tibia has three almost equally long and strong apical spurs, while in *Scotinosoma* there are but one long and two very short apical spurs. None of the species here included have conspicuous dark markings on the wing except along the costa. There are usually a number of short serially arranged setulae on the central portion of the anteroventral surface of the hind tibia.

## Key to the Species.

1. No distinct dark costal streak on the wing, the marginal cell (stigma) yellowish, and the costal vein beyond it to apex dark brown, the brown colour not extending on to membrane except faintly from apex of second to beyond apex of third vein; the cross-veins at base of discal cell and the inner cross-vein rather distinctly dark-clouded, the outer cross-vein very faintly so; no apical palette on arista of male; posterior notopleural bristle not duplicated, short in female . . . . . *erasa*, n. sp.  
A dark brown costal streak from base to apex of the wing that extends on to membrane on at least a part of its extent; other characters not as above *in toto* . . . . . 2
2. Scutellum with 4 strong bristles; costal margin of wing uniformly black-brown from base to apex, the dark colour not extending over the second vein except at its tip; posterior notopleural bristle duplicated . . . . . *completa* (Malloch)  
Scutellum with 6 well-developed bristles, the apical pair the longest; costa with a brown streak from base to apex, darkest in the stigma and apically, yellowish along the inner edge of the second vein and in the costal cell . . . . . 3
3. The brown costal streak not extending over the second vein except at its apex; posterior notopleural bristle duplicated . . . . . *attenuata* (Malloch)  
The brown costal streak extending spot-like over the second vein a little before its apex; posterior notopleural bristle not duplicated; male with an apical palette on the arista . . . . . *bistrigata* Hendel

## SCOTINOSOMA BISTRIGATA Hendel.

Abhandl. Zool.-botan. Ges., viii, 1914, 120.

Described from both sexes taken at Cape York, Queensland. I have 2 males from Northern Queensland. It ought to occur in New Guinea.

## SCOTINOSOMA COMPLETA (Malloch).

Proc. U.S. Nat. Mus., lxxviii, art. 15, 1931, 27 (*Pseudepicausta*).

Cairns, Queensland. Ought to occur in New Guinea.

## SCOTINOSOMA ATTENUATA (Malloch).

Op. cit., lxxviii, art. 15, 1931, 27 (*Pseudepicausta*).

Same locality as above.

## SCOTINOSOMA ERASA, n. sp.

♂, ♀. Head brownish-yellow, frons brown, ocellar triangle, upper orbits, and upper occiput, shiny brownish-black, frontal, facial, and postocular orbits white-

dusted. Frontal hairs yellow, the bristles black. All four vertical bristles strong, the orbitals rather weak, and the divergent ocellars distinct though not very long. Arista bare, without apical palette in male, third antennal segment in that sex much wider than in female and about four times as wide as the almost linear parafacial. Postocular bristle indistinguishable from the setulose hairs.

Thorax shiny black, with distinct blue tinge, the mesonotum with dense white dust on a broad central vitta and a similar vitta on each side, the intervening glossy stripes much widened in front of the suture; pleura with a white-dusted vitta from base of fore coxa to base of haltere; scutellum but slightly dusted. Hairs mostly yellow, the bristles black. Legs brownish-black, fore coxae, fore femora, all trochanters, and apices of mid and hind femora, tawny-yellow. Posteroventral bristles on fore femora rather long and fine; hind femora with several bristles near apices on the anterodorsal surface. Wings yellowish-hyaline, veins pale brown, darkest apically, the markings as described in the foregoing key to the species. Inner cross-vein long, sloped outward at lower extremity, the latter at two-fifths from the apex of discal cell; first posterior cell not widened at apex. Abdomen metallic-blue, with a brownish patch on each side near base in the male. Squamae and halteres yellow. Length, 6-7 mm.

Type, male, and allotype, Stradbroke Is., Queensland. May occur in New Guinea.

#### PSEUDEPICAUSTA Hendel.

*Abhandl. Zool.-botan. Ges.*, viii, 1914, 112.

The genotype, *chalybea* Doleschall, has no fronto-orbital bristles and the mid tibia with three equally strong apical spurs. Whether the other four species included below have these characters in common I do not know.

#### Key to the Species.

1. The entire wing beyond the outer cross-vein black-brown, with an oblique curved white fascia before the apex; fore femur of male with a series of lanceolate posteroventral bristles ..... *lagarosia* Hendel  
Wing not marked as above; fore femur of male without lanceolate bristles ..... 2
2. Vertex with only the outer divergent pair of bristles; both cross-veins of the wing dark clouded ..... *chalybea* (Doleschall)  
Vertex with 4 strong bristles, the inner pair incurved ..... 3
3. Species brown in colour, with grey dust; both cross-veins brown clouded, the marks separated ..... *multilloides* (Walker)  
Species more or less metallic, generally blue or greenish-blue in colour ..... 4
4. Inner cross-vein not clouded, outer one only faintly so ..... *apicalis*, n. sp.  
Both cross-veins dark clouded, the marks connected in discal cell ..... 5
5. The broad brown zigzag cross-band on the wing extends to the costa .....  
..... *angulata* Hendel  
The zigzag cross-band is interrupted above the inner cross-vein ... *wallacei* Hendel

#### PSEUDEPICAUSTA CHALYBEA (Doleschall).

*Natuurk. Tijdschr. v. Ned.-Ind.*, xvii, 1858, 125 (*Herina*).

Apparently a widely distributed species, recorded from New Guinea northward to the Philippine Islands. I have seen it from Aitape and Wewak (F. H. Taylor), Aitape, New Guinea (L. E. Cheesman), Makada Is., near New Britain (F. H. Taylor).

#### PSEUDEPICAUSTA LAGAROSIA Hendel.

*Abhandl. Zool.-botan. Ges.*, viii, 1914, 118.—? *Dacus pompiloides* Walker, *Jour. Proc. Linn. Soc. Lond.*, iii, 1859, 116.

Described from a male from New Guinea. Hendel suggested the above synonymy. The Walker species is from the Aru Islands.

PSEUDEPICAUSTA MULTILLOIDES (Walker).

*Jour. Proc. Linn. Soc. Lond.*, iii, 1859, 115 (*Dacus*).  
New Guinea. Not recorded since its original description.

PSEUDEPICAUSTA ANGULATA Hendel.

*Abhandl. Zool.-botan. Ges.*, viii, 1914, 118.  
Celebes. I have seen this species from the Federated Malay States; it may be expected to occur in New Guinea.

PSEUDEPICAUSTA WALLACEI Hendel.

*Op. cit.*, viii, 1914, 117.  
Described from a female from New Guinea.  
The scutellum in this species has fine hairs in addition to the strong marginal bristles.

PSEUDEPICAUSTA APICALIS, n. sp. Pl. iv, fig. 17.

♀. Similar in general colour to *chalybea*, but the mesonotum is largely brown-dusted, which feature is best seen from the side, the disc of the scutellum is also brownish-dusted. The mesonotal hairs are dark brown. The wing (Pl. iv, fig. 17) has the stigma dark brown, with a yellowish suffusion in the marginal cell, there is a rather faint fuscous cloud on the outer cross-vein, and the apex of the wing is fuscous from a little beyond the outer cross-vein to the tip. Legs blackish-brown, fore femora and coxae and apical third or more of mid femora brownish-yellow, mid metatarsus and most of hind one orange-yellow. Squamae dark brown, knobs of halteres pale yellow. Vertex with 6 bristles, one small orbital present, scutellum with 4 bristles. Other bristling as in *chalybea*. Length, 8 mm.

Type, Papua: Mafulu, 4,000 feet, Jan. 1934 (L. E. Cheesman).  
The antennae are broken off in the type.

POGONORTALIS Hendel.

Hendel, in de Meijere, *Tijdschr. v. Ent.*, liv, 1911, 370; *Abhandl. Zool.-botan. Ges.*, viii, 1914, 143.

This genus was first described in a footnote to a paper by de Meijere as above listed and subsequently in the second paper referred to above as a new genus. As there is no question that Hendel supplied the data published by de Meijere, the genus is credited to Hendel.

In the two species that I have seen there are a few setulae on the base of the second vein on its underside, and there is a sharp raised edge on the anteroventral margin of the hind femur about one-third from its apex in both sexes. Sometimes there is a marked expansion of the jowls in the male and the bristles of the beard are much shorter than in *doctlea*, the genotype. The frons has two pairs of short orbital bristles, the ocellars are minute, and the postocular bristle is of moderate length.

*Key to the Species.*

1. Costal margin without a black or dark brown mark at apex of the stigma; body bronzy or brassy-green ..... *similis* Hendel
- Costal margin with a conspicuous black or dark brown mark at the apex of the stigma that extends backward to or beyond the third vein; body blackish-brown ..... 2
2. The black-brown apical spot on the wing does not extend basally to the apex of the second vein ..... *doctlea* (Walker)
- The black-brown apical spot on the wing extends basally to the apex of second vein (Netherland Indies) ..... *uncinata* de Meijere

## POGONORTALIS DOCLEA (Walker).

*List Dipt. Ins. Brit. Mus.*, pt. iv, 1849, 1035 (*Trypeta*).—*Pogonortalis barbifera* Hendel, *Abhandl. Zool.-botan. Ges.*, viii, 1914, 144.

An Australian species that very probably will be found in New Guinea. Walker's description unmistakably applies to Hendel's genotype.

## POGONORTALIS SIMILIS Hendel.

Op. cit., viii, 1914, 145.

Described from New Guinea.

## RIVELLIA Robineau-Desvoidy.

*Mém. Acad. Roy. Sci. Inst. de France*, ii, Essai Myod., 1830, 729.

A large genus of almost cosmopolitan distribution, keys to the species of which from the different faunal regions have been published by Hendel in his paper on the subfamily. I present below a key to the recorded species from New Guinea with the description of one new species.

*Key to the Species.*

1. Wing with only the subcostal cell and a spot at the apex dark brown ..... *connata* Thomson  
Wing with several dark fasciae ..... 2
2. The oblique dark fasciae over the cross-veins more or less distinctly connected at or near the hind margin of the wing; aristae usually distinctly pubescent or short-haired ..... 6  
The oblique dark fasciae over the cross-veins of the wing not connected behind, the one over the inner cross-vein ending at the fifth vein; aristae bare, or pubescent (*fusca*); posterior basal cell of the wing hyaline ..... 3
3. The black fascia over the inner cross-vein connected in part with the black basal mark ..... *affinis* Hendel  
The black fascia over the inner cross-vein separated from the basal black mark by a hyaline stripe about as wide as the fascia ..... 4
4. Costal cell of the wing hyaline except at its base; the short black fascia over the fuscation of second and third veins and apex of the subcostal vein not fused with the dark cloud in the anterior basal cell ..... *fusca* Thomson  
Costal cell of the wing brown or black; the short black fascia over the fork of second and third veins and apex of the subcostal vein fused with the black colour of the wing base ..... 5
5. Thorax greenish-black; abdomen red at base or entirely so; legs brownish-black, bases of mid and hind tarsi yellow ..... *rufibasis*, n. sp.  
Thorax, abdomen, and legs, red, tibiae and tarsi brownish ..... *ferruginea* Hendel
6. Posterior basal cell of the wing and a streak along the fifth vein in basal half of the discal cell hyaline; fusion of the fasciae over the cross-veins faint behind the fifth vein ..... *dimidiata* de Meijere  
Posterior basal cell of the wing and basal half of the discal cell black-brown; fusion of the fasciae over the cross-veins at or behind fifth vein very distinct, dark brown ..... 7
7. The dark marks on the wing not extending to the anal vein on the basal half; the fusion of the fasciae over inner and outer cross-veins broad, unbroken behind the fifth vein, but not attaining the hind margin of the wing except directly below the outer cross-vein; mesonotum more or less reddish in front; head, including the antennae and palpi, fulvous-yellow or red ..... *connexa* Hendel  
The dark marks on the wing extending to the anal vein on almost its entire extent; the fusion of the fasciae over inner and outer cross-veins evident at only the hind margin of the wing; mesonotum blue-black; head, including the antennae and palpi, black, the latter slightly whitened at apices ..... *radiata* Hendel

## RIVELLIA CONNATA (Thomson).

*Eug. Resa*, Zool. 1, 1868, 575 (*Hernia*).

This species is common in Australia and has been recorded from Fiji, so that it may yet be found in New Guinea.



## RIVELLIA FERRUGINEA Hendel.

*Abhandl. Zool.-botan. Ges.*, viii, 1914, 159.

The entire insect is usually reddish-yellow in colour, with the dorsum of the thorax sometimes slightly darkened and the tibiae and tarsi brownish.

Described from New Guinea, but not in the present collection.

## RIVELLIA RUFIBASIS, n. sp. Pl. iv, fig. 18.

♂, ♀. Differs from *ferruginea* in having the thorax except the prothoracic region greenish-black, the mesonotum with grey dust, the abdomen infuscated apically in the male, brownish-red in the female, the legs except the bases of the mid and hind tarsi brownish-black, and the wing markings darker and broader, the brown streak along the apex of the costa in particular being much wider. The third antennal segment is not angulate at the apex above, and the arista is bare. Length, 5 mm.

Type, male, allotype and 2 paratypes, Wewak, New Guinea (F. H. Taylor); one paratype, Aitape, New Guinea, Oct.-Nov. 1936 (L. E. Cheesman).

## RIVELLIA FUSCA (Thomson).

*Eug. Resa*, Zool. 1, 1868, 575 (*Hernia*); Osten-Sacken, *Berl. Ent. Zeitschr.*, xxvi, 1882, 211.

A small blue-black or greenish-black species, with the black fasciae on the wing very slender.

Recorded from Java, the Philippines, Formosa, and the Solomon Islands. New Guinea: Aitape, Oct.-Nov. 1936 (L. E. Cheesman).

## RIVELLIA AFFINIS Hendel.

*Abhandl. Zool.-botan. Ges.*, viii, 1914, 161.

Described from New Guinea and not in this collection.

## RIVELLIA DIMIDIATA de Meijere. Pl. iv, fig. 19.

*Tijdschr. v. Ent.*, li, 1908, 122.

This species was described without locality record by de Meijere, Hendel listing it as probably from Java, but de Meijere subsequently gave the type locality as New Guinea.

Three specimens, Dutch New Guinea: Lake Sentani Iffar, August 1936 (L. E. Cheesman).

## RIVELLIA CONNEXA Hendel.

*Abhandl. Zool.-botan. Ges.*, viii, 1914, 163.

A smaller and more intensely black marked species.

Originally described from Astrolabe Bay, New Guinea, from females only. I have before me 3 specimens from Wewak, New Guinea, and 5 from Kavieng, New Ireland, one pair of the latter taken *in copula* (F. H. Taylor), Makada Is., near New Britain (F. H. Taylor); Papua: Mediri (Fly River), one specimen 12.xii.22 (A. R. McCulloch).

## RIVELLIA RADIATA Hendel.

*Op. cit.*, viii, 1914, 161.

Described from New Guinea. One specimen, Wewak, New Guinea (F. H. Taylor).

## ASYNTONA Osten-Sacken.

*Bull. Ent. Soc. France*, 1881, 135.

A peculiar genus, readily distinguished by the wide head, especially in the male, and the downwardly-flexed wings that generally adhere quite closely to the

body and appear wrinkled or broken. This flexure is caused by a diagonal weak line at or near the middle of the wing with corresponding weak parts of the veins extending apically, and a crease extending from near the base to apex along the centre of the wing. The posterior basal cell of the wing is much longer than the discal cell, and the fourth vein ends in the wing tip. The third vein is not raised above the level of the membrane on the upper side and usually the setulae there are very sparse or even lacking. A striking feature of both sexes before me is the presence of 6 evenly-spaced bristles along the edge of the vertex in the genotype. But in one specimen of *flaviceps* the second bristle from each eye is placed well forward of the others, indicating that it is really the upper fronto-orbital and not an extra vertical bristle. There is also frequently a very weak additional orbital on each side rather high on the frons.

ASYNTONA TETYROIDES (Walker). Pl. iv, fig. 20.

*Jour. Proc. Linn. Soc. Lond.*, iii, 1859, 112 (*Lamprogaster*).—*Asyntona doleschalli* Osten-Sacken, *Berl. Ent. Zeitschr.*, xxvi, 1882, 224.

A deep metallic-blue coloured species, with dark wings marked with a few small sub-hyaline dots, the head with a yellow postocellar streak and the tarsi except the apical two segments yellow. Eyes in male produced into a point on outer side, rounded in female. Frons wider than long, narrowed in front; lateral edges of frons, especially in the male, beaded.

Wewak, New Guinea. Recorded from New Guinea, and the Philippine Islands. Both sexes are represented in Mr. Taylor's material, attracted to light.

ASYNTONA FLAVICEPS Hendel.

*Abhandl. Zool.-botan. Ges.*, viii, 1914, 291.

Similar to the genotype, distinguished from it by the entirely yellow head, tibiae, and tarsi. The frons in both sexes is longer than wide, parallel-sided, and not beaded on lateral edges in either sex. Eyes in both sexes rounded.

Wewak, New Guinea, both sexes (F. H. Taylor) attracted to light; Solomon Islands. Described from one female, Cretin Is., New Guinea.

NAUPODA Osten-Sacken.

*Bull. Soc. Ent. France*, 1881, 135.

Quite similar to *Asyntona*, distinguished by the wing venation as stated in the generic key given above. The genotype has no orbital bristles, but most of the other species have at least one distinct pair. Hendel did not see the genotype, and merely copied Osten-Sacken's original description.

NAUPODA REGINA Hendel.

*Abhandl. Zool.-botan. Ges.*, viii, 1914, 298.

This species was described from New Guinea and North Queensland. I have it from Cairns, Queensland, and a large series from Wewak, New Guinea (F. H. Taylor).

A Fijian species, *simmondsi* Bezzi, may yet be found in New Guinea. It differs from other species of the genus in having the aristae long-haired, and from *regina* in having the wing black from the base to the middle, the apical half or less and the hind margin hyaline.

None of the other species of the genus are likely to occur in New Guinea.

## ZYGAENULA Doleschall.

*Natuurk. Tijdschr. Ned.-Ind.*, xvii, 1858, 117.

The genotype, *paradoxa* Doleschall, is unknown to me and is not known to occur in New Guinea. Hendel in his "Revision of the Platystominae", p. 292, gives only Gerstaecker's description, which does not include details of the structure or armature of the mid femur. It is thus impossible to determine the validity of *Mesoctenia*, though its author, Enderlein, had apparently both sexes of *paradoxa* from Amboina before him when he erected his new genus.

## MESOCTENIA Enderlein.

*Mitt. Zool. Mus. Berl.*, xi, 1924, 130.

This genus was erected for the reception of a species, *ralumensis*, assumed to be new to science, but which I consider is without doubt a synonym of *Zygaenula coalescens* Hendel. I distinguish the genus from *Brea* Walker, in the foregoing generic key. It is hard to understand why Hendel did not couple his *coalescens* with the species of *Brea* in his generic key as the mid femoral characters are similar in both. *Mesoctenia* may be a synonym of *Zygaenula*; the genotype of the latter is unknown to me.

## Key to the Species.

1. Legs yellow, femora black; mesopleura with a bright yellow upper margin ..... *hilaris* (Hendel)  
     ..... 2  
     Legs entirely yellow; mesopleura black ..... 2
2. Wing with three pale slender dark fasciae beyond middle ..... *coalescens* (Hendel)  
     Wing with four dark fasciae ..... *celyphoides* (Walker)

## MESOCTENIA COALESCENS (Hendel).

*Abhandl. Zool.-botan. Ges.*, viii, 1914, 293 (*Zygaenula*).—*Mesoctenia ralumensis*, Enderlein, *Mitt. Zool. Mus. Berl.*, xi, 1924, 131.

Described from two males from New Britain, redescribed from the same locality by Enderlein, and represented by a male now before me from apparently the same lot.

Besides the three slender dark fasciae, the wing is pale brownish basally as far out as the apex of the posterior basal cell.

## MESOCTENIA HILARIS (Hendel).

*Abhandl. Zool.-botan. Ges.*, viii, 1914, 294 (*Zygaenula*).

Described from a female specimen taken at Maroka, New Guinea. I have before me a fine female specimen which shows the same wing markings as *coalescens* and in addition a small dark spot at the apex of the fourth vein.

Papua: Kokoda, 1,200 feet, August 1933 (L. E. Cheesman).

## MESOCTENIA CELYPHOIDES (Walker).

*Jour. Proc. Linn. Soc. Lond.*, iii, 1859, 112 (*Lamprogaster*).

Known from the original description. Generic position in question.

## BREA Walker.

*Jour. Proc. Linn. Soc. Lond.*, iii, 1859, 117.

This genus is readily distinguished from its nearest relatives by the very much stouter mid than hind femur with its two series of stout spines on the ventral surface, the curved mid tibia which fits between the two series of femoral spines, and the short hairs on the upper surface of the arista, the hairs being present only at base below.

Hendel gave a key to six species in his paper on the subfamily, all except one being known to him and described from New Guinea. In 1924 Enderlein described two additional species, one from New Guinea. Only two of the species are known to me, but I present below an adaptation of Hendel's key to aid in the identification of the species.

*Key to the Species.*

1. The large black mark over the inner cross-vein of the wing enclosing a hyaline spot in the marginal cell ..... 2  
     The large black mark over the inner cross-vein without a hyaline spot in the marginal cell ..... 3
2. Legs yellow, only the fore femora at apices and the fore tibiae at bases blackened; mesonotum black, with a broad grey central vitta ..... *discalis* Walker  
     Legs yellow, all the tibiae black, femoral bases brown; mesonotum dull olive-green, with two broad coffee-brown vittae ..... *discifera* Hendel
3. The dark fascia over the outer cross-vein is much broader than the hyaline strip separating it from the fascia over the inner cross-vein, being about equal in width to the length of the outer cross-vein, and connected with the anterior fascia in the discal cell; mid and hind femora yellow ..... *flavipes* de Meijere  
     Only a slender dark fascia over the outer cross-vein that is not connected with the broad mark over the inner cross-vein ..... 4
4. Head largely, and fore femora entirely, black; male without an apical palette on the arista ..... *nouhuysi* de Meijere  
     Head and all, or almost all, of the fore femora orange-yellow; male with an apical lanceolate palette on the arista ..... 5
5. Mid and hind femora and all tibiae black; the black mark over the inner cross-vein not filling all of basal half of the discal cell, nor extending over the fifth vein; humeri white-dusted on upper edges ..... *contraria* Walker  
     Mid femora more or less blackened, more extensively so in the female, hind femora entirely orange-yellow, bases of all tibiae blackened; the black mark over the inner cross-vein filling the entire basal half of the discal cell and extending well over the fifth vein ..... *magnifica* Hendel

BREA DISCALIS Walker.

*Jour. Proc. Linn. Soc. Lond.*, iii, 1859, 117.

Described from Aru Islands and not subsequently reported.

BREA DISCIFERA Hendel.

*Abhandl. Zool.-botan. Ges.*, viii, 1914, 270.

Described from Key Island from a single female.

Most nearly like *magnifica*, differing as noted in the key to species.

BREA FLAVIPES de Meijere.

*Nov. Guin.*, ix, Zool., livr. 3, 1913, 371; Hendel, *Abhandl. Zool.-botan. Ges.*, viii, 1914, 272.

Described from one female from Biwak Island, New Guinea.

Similar to *magnifica* in most respects, differing as noted in the key and in having the tibiae dark brown except their apices and the apical half of the fore femora also dark brown.

Hendel suggests the possibility that this is *discalis*, though Walker says that there is a 'blackish line' over the outer cross-vein, which would hardly equal the broad black fascia present in *flavipes*.

BREA CONTRARIA Walker. Pl. iv, fig. 21.

*Jour. Proc. Linn. Soc. Lond.*, iii, 1859, 117.—*Maria caeruleiventris* Bigot, *Rev. et Mag. de Zool.*, 1859, 311.

This species was originally described from New Guinea and recorded from Aru Is. It has the legs more extensively black than any of the other species

and is readily distinguished from any of them by the wing markings. Halteres black-brown.

A large series of both sexes, Wewak, New Guinea (F. H. Taylor).

BREA MAGNIFICA Hendel. Pl. v, fig. 22.

*Abhandl. Zool.-botan. Ges.*, viii, 1914, 271.

Originally described from a single male taken in New Guinea.

Hendel states in his key that the "four hind legs" are entirely yellow, but in his description he gives the bases of all tibiae as black-brown. The latter statement is correct for most specimens of the male sex, but the apices of the mid femora are in all females more or less distinctly blackened, and in a few specimens the greater part of the mid femora is black. The different wing markings are sufficient to distinguish it from any other species of the genus. The costal edge between the apices of the third and fourth veins is narrowly browned, which is not the case in *contraria*.

A large series of both sexes, Wewak, New Guinea (F. H. Taylor).

BREA RALUMENSIS Enderlein.

*Mitt. Zool. Mus. Berl.*, xi, 1924, 129.

This species was described from a single female from Ralum, New Britain.

It was merely distinguished from *contraria* by a few characters, of which the following appear to be the most important: Mesonotum with three slender vittae of yellowish-brown tomentum (white in *contraria*), fore coxae and fore femora brown (yellow in *contraria*); of the brown basal fascia there is only a small spot on the fork of the radius.

It may be a variety of *contraria*, but I have seen no specimen that appears to agree with it from New Guinea.

BREA BASILIS Enderlein.

*Op. cit.*, xi, 1924, 129.

This species apparently falls with *discalis* and *discifera* in the foregoing key. It differs from both in having the mesonotum black, with thick yellowish-grey tomentum; there is no mention of vittae in the description. The legs are ochre-yellow, mid and hind tibiae brown, and the fore tibiae somewhat brownish. Length, 7.5 mm.

North-east New Guinea.

I have seen no species that agrees with this one.

PTEROGENIA Bigot.

*Rev. et Magas. de Zool.*, (2) xi, 1859, 312.

Species of this genus have been recorded from the Straits Settlements, Sarawak, Borneo, Batchian, Molucca, Aru, Java, Formosa, Ceylon, the Philippine Islands, New Guinea, and Australia. Hendel keyed 14 species and included 13 additional species described by Walker that he tentatively assigned to the genus in his large paper on the Platystominae. The New Guinea and Australian species may be distinguished as in the key given below.

A striking character of the species before me is the presence of short stiff hairs on the upper side of the stem vein of the wing at its base as in *Euprosopia*.

*Key to the Species of New Guinea and Australia.*

- |   |   |
|---|---|
| 1. Scutellum black, with the margin pale yellow ..... | 2 |
| Scutellum entirely black or dark brown .....          | 3 |

2. The preapical dark fascia on the wing meeting the dark cloud over the outer cross-vein; the small hyaline costal spot through stigma extending to third vein; palpi brown at apices ..... *pectoralis* Hendel  
 Preapical dark fascia on the wing not meeting the dark cloud over the outer cross-vein; the small hyaline costal spot through stigma not extending over second vein; palpi entirely yellow ..... *similis*, n. sp.
3. Thorax entirely shiny black; aristae with very long hairs; palpi blackish-brown ..... *fuliginosa* Hendel  
 Thorax partly red or yellow; aristae moderately long-haired; palpi red, apices darkened ..... 4
4. Frons and mesonotum black-haired; face and lower occiput blackish-brown ..... *nubecula* Hendel  
 Frons and mesonotum golden-haired; face and lower occiput red .. *latericia* Hendel

## PTEROGENIA PECTORALIS Hendel.

*Abhandl. Zool.-botan. Ges.*, viii, 1914, 316.

Described from Bogadjim (Stephansort), New Guinea. I have seen one specimen from North-east New Guinea (Kaiser Wilhelmsland), and one, Papua: Kokoda, 1,200 feet, August 1933 (L. E. Cheesman).

## PTEROGENIA SIMILIS, n. sp.

♂, ♀. Similar to *pectoralis*, but the wing pattern is different, the frons narrower, the legs preponderantly yellow as in the variety of *pectoralis* described by Hendel (*Abhandl. Zool.-botan. Ges.*, viii, 1914, 316).

Type, male, Kuranda, Queensland (Dodd).

## PTEROGENIA FULIGINOSA Hendel.

*Abhandl. Zool.-botan. Ges.*, viii, 1914, 309.

This New Guinea species is not known to me except from the description. Described from Maroka, New Guinea.

## PTEROGENIA NUBECULA Hendel.

Op. cit., viii, 1914, 314.

Described from Burpengary, Queensland, and New South Wales.

I have two specimens from Kuranda, Queensland, sent to me by Mr. F. H. Taylor. It may occur in New Guinea.

## PTEROGENIA LATERICIA Hendel.

Op. cit., viii, 1914, 312.

This form was considered doubtfully distinct from *nubecula* by its describer. I have seen no specimen that has golden hairs on the mesonotum, but occasionally in this and related genera general specimens have the hairs yellowish instead of black as in the mature individuals of the same species.

Queensland.

## NEOHEMIGASTER, n. n.

*Hemigaster* Rondani (*nec* Brullé), *Ann. Mus. Civ. Stor. Nat. Gen.*, vii, 1875, 431.

This genus is distinguished from *Pterogenia* by the following characters: Base of the stem-vein of the wing bare above, lateral angles of the clypeus more or less produced downward and with a small rounded elevation on the dorsum, vertex with four strong bristles, humeral bristle present. The humeral bristle is not always present in *Pterogenia*, and while the antepenultimate section of the fifth vein is either bare or setulose in that genus, in all species of *Neohemigaster* it is setulose. The apex of the second abdominal tergite and usually to a lesser extent the base of the third in all species of the latter is compressed in centre and furnished with a sharp keel-like elevation.

This last character is met with also in *Tropidogastrella* Hendel, but in the latter the third antennal segment is much longer, reaching to or beyond the epistome, and the structure of the face and prelabrum is different. Despite the removal of this genus so far from *Pterogenia* in Hendel's key to the genera, it is closely related to both the genera now under discussion.

I have proposed the new name *Neohemigaster* for Rondani's concept, with the same genotype.

NEOHEMIGASTER ALBOVITTATA Rondani.

Op. cit., vii, 1875, 431.

I identify as this species a male from Sandakan, Borneo, sent me some years ago by the late C. F. Baker.

Although no species known to me from New Guinea is referable to this genus, there may be such that are as yet unknown to me, and the acceptance of the genus contrary to Hendel's action, who placed the genotype in *Pterogenia*, appears to justify the inclusion of the above data in this paper.

I have seen two additional species of the genus from Sibuyan Island.

CHAETORIVELLIA de Meijere.

Nov. Guin., ix, Zool., livr. 3, 1913, 376.

A monobasic genus, distinguished from its allies by the single pair of strong orbital and vertical bristles, the very short antennae which are not half as long as the face and inserted at the middle of the eye in profile, the plumose aristae, lack of humeral, anterior notopleural, supra-alar, and prescutellar acrostichal bristles. Scutellum haired, with four marginal bristles.

CHAETORIVELLIA TRIFASCIATA (Doleschall).

Natuurk. Tijdschr. v. Nederl. Ind., xvii, 1858, 121 (*Ortalis*).—*Ortalis punctifascia* Walker, Jour. Proc. Linn. Soc. Lond., vi, 1862, 15.

A small glossy blue-black species, with black head on which there is a silvery-white stripe round the eye-margins; antennae and palpi and lower half of face brown. Pleura with a silvery central vitta. Basal two segments of all tarsi orange-yellow. Wings whitish-hyaline, with three dark brown fasciae as follows: a short one from the humeral cross-vein to the anal cell, a broad complete one filling the area between the apices of the subcostal and first veins that encloses a small hyaline spot on the costa at the middle of the stigma, and a third one much narrower from the costa between the apices of first and second veins to fifth vein and enclosing the outer cross-vein which sends an equally wide streak along the costa to the apex of the fourth vein.

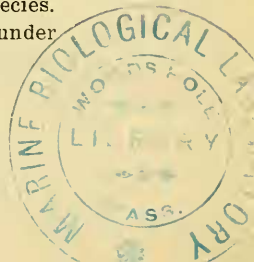
Recorded from New Guinea, Djilolo, Molucca, and Amboina (type locality). One female, Papua: Kokoda, 1,200 feet, August 1933 (L. E. Cheesman).

SCHOLASTES Loew.

Mon. N. Amer. Dipt., iii, 1873, 38; Hendel, *Abhandl. Zool.-botan. Ges.*, viii, 1914, 248; Curran, *Proc. Cal. Acad. Sci.*, xxii, ser. 4, no. 1, 1936, 23.

The robust habitus, haired aristae, strong orbital and sternopleural bristles, the subtriangular, quite densely short-haired scutellum with its six marginal bristles, and the almost invariable yellow sublateral lines on the mesonotum and marginal yellow line on the scutellum readily distinguish this genus from others in the family.

Hendel recognized 6 species, and in 1936 Curran described 3 additional species. I give below a key to those species known to me, and notes on some others under those that they are apparently most closely related to.



*Key to the Species.*

1. Supra-alar bristle lacking; mesonotum with almost invariably four pairs of dorso-central bristles, the anterior one at or slightly in front of the suture; arista of male with, that of female without, an apical palette; first wing-vein setulose on a part of its basal half below ..... *cinctus* Guérin  
Supra-alar bristle present; mesonotum with 3 or 2 pairs of short dorsocentrals, all postsutural ..... 2
2. The prescutellar pair of acrostichal bristles lacking; dorsocentrals 0+1 or 0+2; sublateral pale line on mesonotum and pale line on margin of the scutellum inconspicuous, the ground colour yellowish-brown; first wing-vein bare below; neither sex with an apical palette on arista ..... *aitapensis*, n. sp.  
Prescutellar pair of acrostichal bristles quite strong; dorsocentrals 0+2 or 0+3; yellow sublateral lines on mesonotum and the yellow marginal line on the scutellum quite conspicuous ..... 3
3. Arista with a lanceolate preapical palette in both sexes; dorsocentral bristles 0+2 ...  
..... *lonchifera* Hendel  
Arista without a preapical palette in either sex ..... 4
4. Dorsocentral bristles 0+3; general colour black, the thoracic lines whitish-yellow; wing with two narrow complete, or almost complete, black fasciae, one over the inner cross-vein and the other over the outer cross-vein ..... *taylori*, n. sp.  
Dorsocentral bristles 0+2; general colour dark brown, the pale lines on the thorax not very conspicuous; wing speckled with pale brown, two darker outstanding subquadrate marks on the costa, one at the stigma and the other before apex of second vein ..... *bimaculatus* Hendel

## SCHOLASTES CINCTUS (Guérin). Pl. v, fig. 23.

*Voy. de la Coquille*, Zool., ii, 1830, 299 (*Platystoma*).

This widely distributed species occurs from the Malayan region to and including Australia.

It must be noted that I distinguish the supra-alar from the postalar bristles, contrary to the system used by Bezzi and Hendel. In *cinctus* there are two strong postalar bristles and no supra-alar. No writer on the group has mentioned this character heretofore, and I am unable to determine whether or not *whitneyi* Curran has the supra-alar bristle. The latter species is described as having three pairs of dorsocentrals, and though the characteristic ring-like mark over the outer cross-vein of the species is similar to that seen in *cinctus*, the markings are more fasciform, and the tip of the wing is shown as having a blackish spot, whereas in *cinctus* the extreme tip is clear.

A series of specimens from Makada Is., Pondo, New Britain (F. H. Taylor); New Guinea: Aitape, Vanimo, Wewak (F. H. Taylor), Marprik (J. R. Rigby and C. M. Deland); and another from Dutch New Guinea: Humboldt Bay, Lake Sentani; Papua: Kokoda (L. E. Cheesman); Mt. Lamington (Northern Division) (C. T. McNamara).

## SCHOLASTES AITAPENSIS, n. sp. Pl. v, fig. 24.

♂, ♀. Head brownish-yellow, frons with a broad brown transverse band on upper half leaving only a yellow line on vertex, and a blackish-brown transverse band on anterior half that is darkest on the anterior carina; face without a dark mark; antennae and palpi orange-yellow. Frons a little longer than wide, slightly widened in front, with a marked transverse carina above the lunule, the latter broadly arched. All four vertical and the single pair of orbital bristles strong. Aristae moderately long-haired to beyond the middle, without apical palette. Genal bristle strong. Thorax brownish-yellow, darker on the mesonotum, the sublateral pale lines quite distinct, but the pale edges of the scutellum not as noticeable; pleura with a pale line above. Supra-alar bristle strong, presutural acrostichals



lacking, dorsocentrals usually two pairs, the anterior pair small and weak. Legs yellow, apical two segments of all tarsi infuscated, metatarsi paler than the remainder of legs.

Wings greyish-hyaline, with dark brown markings (Pl. v, fig. 24), the most conspicuous being a short fascia from the costa at base of the stigma that extends backwards to the fourth vein, two similar marks at apex of the second vein, and a larger spot in the wing tip that is very narrowly separated from the margin, and in addition to these there are two short streaks from costa to fourth vein between the two first-mentioned costal marks, the outermost one sometimes connecting with a mark on the outer cross-vein, four in the first posterior cell, two in the second posterior cell, a streak from middle of the discal cell to near hind margin, and a curved streak basad of the latter. Halteres yellow. Abdomen coloured as thorax, but the tergites are more or less extensively violet-blue; hypopygium of male yellow, genital cone of female black. Length, 6-7 mm.

Type, male, allotype and 6 paratypes, Aitape, New Guinea, 1 paratype, Madang, New Guinea (F. H. Taylor); one, Solomon Is., Shortland Is., Korovo, 23.iv.1934 (H. T. Padgen, Brit. Mus.).

#### SCHOLASTES LONCHIFERA Hendel.

*Abhandl. Zool.-botan. Ges.*, viii, 1914, 253.

Described from Cook Islands. I have examined the type specimen in the United States National Museum. It is a common species in the Society Islands and probably will yet be found in New Guinea.

#### SCHOLASTES BIMACULATUS Hendel.

*Abhandl. Zool.-botan. Ges.*, viii, 1914, 252.

Makada Is., off New Britain (F. H. Taylor).

#### SCHOLASTES TAYLORI, n. sp. Pl. v, fig. 25.

♂, ♀. Head testaceous-yellow, occiput largely black above, frons with two broad black bands, one just in front of the vertex and the other on anterior margin, the latter separated from eyes by a narrow yellow line. Upper half of face except lunule black. Antennae and palpi brownish-yellow. Frons about 1.25 times as long as wide, slightly widest at middle, upper orbits glossy; four vertical and two orbital bristles strong. Arista moderately long-haired to near apex, without apical palette. Genal bristle strong. Thorax black, with a sharply contrasted pale yellow submarginal line on mesonotum that is broken at the suture and connected with the pale yellow marginal line on the scutellum; humeri pale yellow; pleura yellow on upper margin and with a less conspicuous yellow central vitta, the lower part of sternopleura yellowish-brown. Supra-alar and prescutellar acrostichal bristles present, dorsocentrals usually 3 pairs. Legs pitchy-black, mid and hind tibiae except their apices yellowish-brown, basal two tarsal segments pale yellow.

Wings hyaline, with brownish-black transverse streaks (Pl. v, fig. 25); the most conspicuous being a fascia from stigma to hind margin, and another from apex of first vein to hind margin that covers the bend in second vein and encloses the outer cross-vein, at which latter point there is a hyaline central spot; in addition to these there is a narrow streak between them from the stigma to the inner cross-vein, 3 or 4 streaks in the apical third, and a number of paler spots in basal third of the wing. Squamae white, with parts of edge

blackened. Abdomen blue-black in female, each tergite in male with a pale yellow apical margin. Length, 6.5–7.5 mm.

Type, male, allotype and 5 paratypes, Wewak, New Guinea (F. H. Taylor).

This species closely resembles *distigma* Hendel, but lacks the two black spots in the lower extremities of the facial foveae that distinguish the Javanese species.

#### ACHIOSOMA Hendel.

*Gen. Insectorum*, Fasc. 157, 1914, 15th April, 100; *Abhandl. Zool.-botan. Ges.*, viii, 1914, 15th June, 200.

This genus resembles *Achias* superficially, but the squamae are very much smaller, and the general structure much less robust. Hendel accepted both of Walker's species as valid, though Osten-Sacken considered there was but one species.

#### ACHIOSOMA DACOIDES (Walker).

*Jour. Proc. Linn. Soc. Lond.*, viii, 1865, 133 (*Achias*).—*Zygothrica robusta* Bigot, *Ann. Soc. Ent. France*, x, ser. 5, 1880, 93.—*Achias gracilis* de Meijere, *Nov. Guin.*, ix, *Zool. livr.* 3, 1913, 373.

I have been unable to see a specimen of this species, or at least a specimen that agrees with the description of Walker or with that of Hendel in 1914. Unless there is very considerable variation in the markings of the head, and to a lesser extent in the colours of the legs and thorax, it appears to me possible that Hendel did not have his specimen correctly identified. He states that there is a black cross-band on the anterior margin of the frons that sends a branch down each antennal fovea widening below and ending at the epistome, and that there is another parallel-margined black stripe on the gena from the eye to the genal margin. The vertex has no black fascia. Walker states that there are two black "vertical" bands by which he means frontal bands, so that I interpret this to include a vertical and an anterior frontal band. Both the descriptions give the legs as preponderantly black, though Hendel gives a small portion of the femora blackened at apices, while Walker gives them with a small portion black at bases. I believe Walker to have made an error here and that Hendel is correct. Walker gives the halteres as having black knobs, which may or may not be correct. He also gives the mesonotum as having three black stripes.

Type locality, Salwatty Island. Recorded from New Guinea.

#### ACHIOSOMA ASPICIENS (Walker).

*Jour. Proc. Linn. Soc. Lond.*, vii, 1864, 229 (*Achias*).

This species is rather similar to the genotype, but in addition to having the costa with a black border extending back to the third vein on its entire length and slightly over that vein at apex, it has a large brown cloud over the outer cross-vein. The mid and hind femora are also entirely yellow.

Type locality Waigou Island, North-west Dutch New Guinea.

#### ACHIOSOMA COSTALIS, n. sp.

♀. A brownish-yellow species, but slightly shiny.

Frons with a narrow dark brown band on vertex from eye to eye, enclosing ocelli, a fainter subquadrate brown patch in centre of front, and on each side in front below level of the brown mark an oblique black streak from eye to level of base of third antennal segment, widened inwardly, and continued downward as a line on each parafacial edge, the foveae yellow, and each side of the facial carina with a brown streak that is linear above and widened below; gena

with a black stripe from eye to lower margin, narrowed below. Head about 1.25 times as wide as thorax, frons about four times as wide as one eye, much depressed centrally, without bristles. Gena nearly twice as high as eye; width of head at epistome less than half that across eyes; face slightly depressed above epistome in profile. Arista moderately long-haired.

Thorax with dense yellow dusting on mesonotum, most noticeable posteriorly, and with faint traces of narrow vittae in front, the pleura whitish-grey-dusted, most densely so centrally, scutellum tawny-yellow, basal half of disc with many microscopic black dots. The only well-developed bristles are the posterior notopleurals and the apical pair of scutellars, the anterior notopleural and the other four scutellars reduced to fine short hairs; disc of scutellum bare.

Wings glassy, veins brown, costa with a dark brown streak from base to apex that extends backward to the third vein on its entire extent and narrowly over that vein at its apex, the tip of the dark colour reaching tip of fourth vein. First posterior cell narrowed at apex; inner cross-vein slightly oblique; penultimate section of fourth vein about three-fourths as long as ultimate; discal cell from base to inner cross-vein much narrower than anterior basal cell. Squamae brownish-yellow. Halteres yellow. Legs tawny-yellow, bases of all tibiae rather broadly dark brown, entire fore tarsi black-brown. All femora with some short strong erect spines on the apical fourth or less below. Abdomen yellow, with the sides of each tergite brown, the central pale part with glistening yellow pile. Basal composite tergite subpetiolate. Length, 12 mm.

Type, Western New Guinea: Mt. Nomo, south of Mt. Bougainville, 700 feet, February 1936 (L. E. Cheesman). British Museum.

Apparently the members of this genus are rare, but few having been recorded, and a careful examination of a series of specimens from the same locality may show that what I am considering to be valid species are merely variants of a single species.

*ACHIOSOMA NIGRIFACIES*, n. sp. Pl. v, fig. 26.

♀. Differs from the three already described species in having the head except a centrally interrupted yellow fascia at middle of the frons dull black, and in having the wing with the inner cross-vein broadly dark brown, the dark colour connected with the dark costal stripe, and a large dark brown apical mark that begins well before the outer cross-vein, and extends to tip, is darkest on the costa, fading out along the hind margin (Pl. v, fig. 26).

Head rather dull black, the frons slightly shiny with a white-dusted line on each side that extends down over the parafacial edges, the facial foveae white-dusted. Antennae dark brown; palpi brownish-yellow. Frons almost half the head-width, wider than long, depressed across centre at the yellow mark, the head a little wider than thorax at bases of the wings, vertex with only the outer vertical showing, this short, but the head is pressed against the thorax so that it is impossible to determine if all four verticals have been present; ocelli very close together and well in front of the vertex. Facial foveae deep, extending to lower third of face, antennae lying within the foveae, third segment about five times as long as wide; arista plumose; palpi wider than antennae; prelabrum exposed. Gena nearly as high as eye, and twice as high as width of parafacial, with a deep broad oblique posterior depression above.

Mesonotum dull black, with three golden tomentose vittae, the central one straight to near posterior extremity where it widens out and connects narrowly on the hind border with the laterals, the latter not covering the humeri, spreading

inward at the suture, and widening on the posterior calli. The humeral bristle is lacking, as are also the dorsocentrals, supra-alar, mesopleural, sternopleural, and pteropleural, the anterior notopleural is short and fine, the posterior one strong, the anterior postalar is present but the other is not; pleura almost uniformly white tomentose; scutellum with ten marginal bristles that become stronger to the apical pair, all situated on small elevated bases or warts, the disc bare, microscopically granulose.

Legs black, fore femora brown, mid and hind femora yellow on basal two-thirds, mid and hind tarsi brownish-yellow. Fore femora with three or four short spines on apical third of the posteroventral surface, mid and hind pair with the same armature but a little weaker and on the anteroventral surface. Dark parts of the wing densely short brown-haired, third posterior cell with less dense but still distinct hairing, the other cells glassy and apparently bare. Inner cross-vein much nearer to apex of discal cell than in the other species. Halteres with fuscous knobs. Abdomen shiny brownish-black, with grey dust at constriction of the composite basal tergite, and large patches of dust on sides of the other tergites, grey on the third, and yellow on the fourth and fifth. Hairs pale on basal half, dark on apical half. Length, 11 mm.

Type, Papua: Mt. Lamington District, Northern Division, Jan.-Feb. 1929 (C. T. McNamara), in Australian Museum. One paratype, topotypical, by same collector, July 1927, retained by the author.

The presence of warts at bases of the scutellar bristles is unique in this species, as is also the number of scutellar bristles, the others as far as I know having but six such bristles. While the character may not invariably hold it appears worth mentioning that there are no fine pale hairs on the ridge above the base of the lower squama in this genus and that such hairs do occur in the species of *Achias* that I have examined.

#### ACHIAS Fabricius.

*Syst. Antliat.*, 1805, 247 (Diptera).

This genus is readily separated from *Achiosoma* by the much larger lower squama, and the more numerous thoracic bristles.

There are 13 species recorded from New Guinea. Hendel's key is the only one that incorporates all the species and I present a modification of it herein in the hope that it may prove of value in the identification of the species.

The genotype, *oculatus* Fabricius, is not definitely known, the only data on it available being in the older descriptions. It was recorded originally from Java, but if this is correct it is the only species of the genus known from outside the Australian and New Guinea regions. Hendel suggested that his *platychirus* was the same species.

#### Key to the Species.

1. Wings with no dark costal streak, with at most a slight yellowish shade or some small pale brown marks near base or very faint marks on the edge ..... 2
- Wing with the costal border dark brown or black, sometimes more or less broken by yellowish or reddish patches ..... 6
2. Thorax, tibiae, and frons yellow, the last with a round black spot; outer cross-vein clouded with brown ..... *venustulus* Walker
- Thorax and tibiae black ..... 3
3. Ground-colour of thorax and scutellum deep metallic black-blue, with slight violet tinge, the mesonotum with surface shagreened and with dark vittae, scutellum almost dull, bare, with 6 marginal bristles; head rusty-red, anterior margin of frons with a dark mark, antennal foveae and sides of epistome with dark

- marks, no dark stripe on the genae; basal half of the costal cell, marginal cell with the exception of the middle and extreme apex, reddish-yellow to brown, and the inner cross-vein dark-clouded ..... *fulviceps* de Meijere  
Ground-colour of thorax and scutellum black-brown; frons and centre of face largely black ..... 4
4. Scutellum bare; fore tarsi of male exceptionally widened; apical three tergites of abdomen in male almost equally long, third a little shorter than either of the others; centre of face black, with only two or four small indistinct spots, centrally reddish ..... *platychirus* Hendel  
Disc of the scutellum haired; fore tarsi in neither sex much widened; fifth abdominal tergite of male as long as third and fourth combined; other characters not as above ..... 5
5. Disc of the scutellum densely golden-yellow haired; bases of fore femora in male yellow ..... *strigatus* de Meijere  
Disc of the scutellum with extremely short inconspicuous pale yellow hairs; fore femora of male black ..... *subnudus*, n. sp.
6. Scutellum rusty-yellow; frons and genae without black-brown stripes, only the sides of the face black-brown in both sexes; scutellum bare ..... *amplividens* Walker  
Scutellum black or dark blue to bronzy coloured ..... 7
7. Abdomen testaceous, but faintly greenish, apices of the tergites piceous; no dark central stripe on face; inner cross-vein quite broadly clouded with black, outer cross-vein not clouded except faintly below; tibiae and tarsi black ..... *brachyophthalmus* Walker  
Abdomen entirely or in large part metallic blue or blue-green; other characters not as above ..... 8
8. Costal streak uniformly brown, emitting two broad fasciae over the cross-veins that are narrowly divided by a hyaline stripe from the second to the fourth vein on field of the wing; scutellum haired on apex and sides ..... *furcatus* Hendel  
Wing without such dark markings, when there is a dark fascia over the inner cross-vein it is much narrower and shorter, and when there is a cloud on the outer cross-vein it is not distinctly connected with the costal streak ..... 9
9. Mesonotum not vittate, uniformly covered with dense ochreous dust; scutellum bare ..... *thoracalis* Hendel  
Mesonotum dusted, but with more or less conspicuous dark vittae ..... 10
10. Genae with a distinct dark brown or black vertical stripe ..... 12  
Genae without a dark vertical stripe; costal margin of the wing black-brown from base to apex and a streak from this over the inner cross-vein ..... 11
11. Scutellum with fine pale hairs; no pale parts in the dark costal stripe; head with a slender black stripe down each facial fovea and with no central facial nor genal black stripes ..... *diversifrons* de Meijere  
Scutellum bare; a pale patch in the costal stripe each side of the fascia over the inner cross-vein; genae, face, and frons with many brown dots ..... *punctulatus* de Meijere
12. Mesonotum with distinct metallic sheen that is not entirely obliterated by the yellowish dusting ..... 13  
Mesonotum not shining, entirely dull ..... 15
13. Legs pitchy-brown, only the femora at bases yellow, tibiae entirely pitchy-brown; black stripes on facial foveae and genae ..... *longividens* Walker  
Femora yellow, black only at apices below, tibiae yellow, with black extremities and a black dorsal stripe ..... 14
14. Eye-stalks reddish-yellow below; clypeus yellow; the dark genal stripe separated from the dark epistomal mark; fore metatarsus noticeably longer than the remaining segments of fore tarsus combined (male); scutellum bare ..... *rothschildi* Austen  
Eye-stalks blackish; clypeus with a black-brown central vitta; the dark genal stripe united with the dark epistomal mark; fore metatarsus as long as the other segments combined in both sexes; scutellum bare ..... *latividens* Walker  
Eye-stalks yellowish below; clypeus with a black central vitta; genal black stripe separated from the dark epistomal stripe; fore metatarsus shorter than remaining segments combined ..... *australis*, n. sp.
15. Genae yellow, black in front; fifth abdominal tergite of male as long as third and fourth combined; eyes of male long stalked; outer cross-vein of the wing not dark-clouded; scutellum haired at apex ..... *albertisi* Osten-Sacken

Gena with a dark stripe; fifth abdominal tergite of male longer than third and fourth tergites combined; eyes of male not stalked; outer cross-vein of wing distinctly brown-clouded; scutellum haired on disc . . . . . *microcephalus* Hendel

ACHIAS VENUSTULUS Walker.

*Jour. Proc. Linn. Soc. Lond.*, viii, 1865, 119.

This is the only species without a dark costal stripe that has the outer cross-vein of the wing dark-clouded, and if the description is accurate the only one in that group that has the femora and tibiae yellow.

Originally described from New Guinea and not subsequently recorded.

ACHIAS PLATYCHIRUS Hendel.

*Abhandl. Zool.-botan. Ges.*, viii, 1914, 204.—? *Achias oculatus* Fabricius, *Syst. Antl.*, 1805, 247 (Diptera).

Hendel suggests the possibility that this may be *oculatus*, and if so then it appears certain that the original citation of Java as the type-locality is erroneous.

The tarsi of all the legs are widened in the male, the fore pair most conspicuously so; the apices of the fore tibiae are also widened. The femora are armed on the apical half below with short bristles or thorns. This last character suggests an affinity with *Achiosoma*, the only specimen I have seen of that genus having similar femoral spines.

Described from a male taken in New Guinea.

ACHIAS FULVICEPS de Meijere.

*Nov. Guin.*, ix, Zool. livr. 3, 1913, 373.

This species also has short bristly thorns on the apical portion of the ventral surface of the femora, longest on the posteroventral surface of the fore pair. The wing tip from before the outer cross-vein is greyish, the basal half of the costal cell, the marginal cell with the exception of the middle and an apical suffusion, reddish-yellow to brown, the inner cross-vein dark-clouded.

Described from a female from New Guinea and not since recorded.

ACHIAS STRIGATUS de Meijere.

*Op. cit.*, ix, Zool. livr. 3, 1913, 372.

Known only from a teneral male specimen. The facial carina is black below, yellow on upper half, the fore femora are yellow on their basal halves. The scutellum is thickly golden-yellow-haired, the ventral femoral setulae are short and weak.

Described from New Guinea and not subsequently recorded.

ACHIAS SUBNUDUS, n. sp.

♂, ♀. This species is apparently very closely related to *strigatus*, differing markedly in having the fore femora entirely black, and the shiny black scutellum with extremely short fine pale hairs, noticeable only with a strong lens. There are no ventral setulae on any of the femora in the specimens before me.

♂. Head more than 1.5 times as wide as thorax, the eye-stalks thick, vertex with 4 bristles, the outer ones about midway between inner one and eye. Frons black to level of bases of antennae, the yellow colour of upper occiput projecting in a short wedge each side of ocelli. Face with a large black-brown spot extending from above middle of facial carina to epistome and laterally to about midway from outer edge of foveae to middle of genae; remainder fulvous-yellow

except a narrow pale yellow streak along the lower edge of the black frontal fascia. Basal two antennal segments pale brown, third and palpi black. Thorax brown-black, only the scutellum distinctly shiny, not metallic, pleura slightly, mesonotum densely, greyish-yellow-dusted, the latter with 4 complete black vittae and the lateral margins black; scutellum without dust; mesonotal hairs short and pale, those on the scutellum very inconspicuous. Bristles as follows: 1 humeral, 2 notopleurals, 1 supra-alar, 2 postalars, 1 pair of dorsocentrals, and 1 pair of prescutellar acrostichals; no mesopleural; scutellars 6, the apical pair the longest and strongest. Legs black, mid and hind femora fulvous-yellow on basal halves, tarsi normal, no evident ventral femoral spines, only some hairs present.

Wings glassy, seen against a white background the apex from before the outer cross-vein appears stained or greyish, much as I assume those of *fulviceps* must be, judging from the description, costa brownish to a little beyond the humeral cross-vein and in stigma, the margin infuscated above fork of second vein, and from there to level of apex of the stigma slightly yellow; fork of second vein and inner cross-vein narrowly darkened. Ultimate section of fourth vein slightly biarcuate, the tip slightly upcurved. Abdomen glossy brownish-black, yellowish at base of composite tergite, with a slight aeneous tinge apically, the hairs yellow except on fifth tergite, long on sides of basal one, the fifth with a series of fine black bristles on apical edge.

♀. Similar to the male, differing in having the head very little wider than the thorax, the outer vertical bristles close to the eyes, the frontal fascia less sharply defined, with no pale yellow streak along its anterior edge, and a black streak from each eye downward on the gena that is sometimes connected with the large black facial mark by a series of minute black dots. The fore femora are usually fulvous-yellow at bases, and all the tibiae are of that colour centrally, the fore pair least distinctly so. Length, 9-12 mm.

Type male, allotype, and 9 paratypes, Papua: Mt. Tafa, 8,500 feet, March 1934 (L. E. Cheesman).

This may be *strigatus*, but there are so many points in which it differs from the description of that species that I prefer to describe it tentatively as new.

#### ACHIAS AMPLIVIDENS Walker.

*Jour. Proc. Linn. Soc. Lond.*, iii, 1859, 122; Hendel, *Abhandl. Zool.-botan. Ges.*, viii, 1914, 212.

The female only was described by Walker, but Hendel described the male. This latter has the eyes on long stalks, in the one described by Hendel the width of the head (17 mm.) greatly exceeded the length of the insect (12 mm.). The scutellum is bare.

Aru Islands (Walker), New Guinea (Hendel).

#### ACHIAS BRACHYOPHTHALMUS Walker. Pl. v, fig. 27.

*Jour. Proc. Linn. Soc. Lond.*, viii, 1865, 119.

A smaller species than most of the others in the genus, with the eye-stalks shorter than usual in the male, the head being 7.5 mm. wide and the length of the insect 10 mm. in the male specimen with the widest head before me. The head in the male has a black-brown stripe covering each antennal fossa and extending to lower margin of face, while the female has, in addition to these, a short black streak on each gena from edge of eye to near middle, tapered to a point below. The frons is black speckled in both sexes, in male dark brown on each side against tips.

Mesonotum densely yellowish-grey-dusted with 4 uniformly wide shiny brown vittae, neither pair extending to the posterior margin, the central pair shortest. Scutellum shiny black, with 6 black bristles, and some microscopic pale hairs on sides of disc. Legs black, femora tawny-yellow except their apices. All femora with short black apical bristles on the posteroventral surfaces of fore and mid pairs and on anteroventral of hind pair. Hind coxae densely brown-haired in male. Wing as Plate v, figure 27. Abdomen sometimes with a marked green tinge. Fifth tergite of male about as long as third and fourth combined. Length, 7-11 mm.

A series of about 50 specimens, both sexes, from Kuranda, N. Queensland (F. P. Dodd).

Originally described from a female taken in New Guinea. Not known to Hendel.

ACHIAS FURCATUS Hendel.

*Gen. Ins.*, Fasc. 157, 1914, April, 103, Taf. 10, fig. 177; *Abhandl. Zool-botan. Ges.*, viii, 1914, June, 216.

Both sexes of this species were described. The scutellum is partly haired above. The short biseriate bristles on the apical portion of the ventral surface of the femora are stated to be quite strong. The entire brown costal streak with the emitted fasciae over both cross-veins should readily distinguish this species from its congeners.

Mafor and Roon.

ACHIAS THORACALIS Hendel.

*Abhandl. Zool-botan. Ges.*, viii, 1914, 213.

Described from two females. The mesonotum is densely ochreous-brown-dusted, without evident dark vittae, and with black hairs. This lack of vittae is unique in the genus as far as we know. The scutellum is bare. Coxae and femora reddish-yellow, tibiae and tarsi black.

Dutch New Guinea.

ACHIAS DIVERSIFRONS de Meijere.

*Nov. Guin.*, ix, Zool. livr. 3, 1913, 371.

The only male before me has the head, including the eye-stalks, 14 mm. in width, the stalks black except at extreme bases below, the frons with black specks that are mostly fused, so that only an irregular mark in centre is reddish-yellow, remainder of head testaceous except a narrow black stripe on each antennal fovea from base of antenna to epistome, and a fuscous transverse stripe on occiput below vertex. Vertex with 4 bristles as usual. Mesonotum with yellowish dust and 4 dark uniform vittae, the sublaterals reddish behind suture; scutellum black, with fine pale hairs and 6 marginal bristles. Legs black, basal half or more of all femora yellow, hind tibiae brownish centrally. Fore tarsi of male slightly flattened.

Wing with a black-brown costal stripe from base to apex that sends a spur over the inner cross-vein, is narrowest for a short stretch just beyond this and faintest in the apex of the first posterior cell. Abdomen metallic-blue, with a reddish shade showing below in parts, hypopygium orange-yellow.

Described from New Guinea, Papua (British New Guinea): Aroa R., Central Division (west of Port Moresby), presented to the British Museum by the Hon. L. W. Rothschild. One male.



## ACHIAS PUNCTULATUS de Meijere.

Op. cit., ix, Zool. livr. 3, 1913, 372; Edwards, *Trans. Zool. Soc. London*, xx, pt. 13, 1915, 416.

Scutellum bare.

Described from a female taken in New Guinea and subsequently recorded from Setakwa River, Dutch New Guinea, by Edwards.

## ACHIAS LONGIVIDENS Walker.

*Jour. Proc. Linn. Soc. Lond.*, iii, 1859, 121.

Walker described both sexes. The head is described as having two black bands on the vertex and 4 black stripes in front. There appears thus to be a genal stripe.

Aru Islands.

## ACHIAS ROTHSCHILDI Austen.

*Nov. Zool.*, xvii, 1910, 459.

Closely related to *latividens*, the outstanding differences between the species being noted in the foregoing key to species.

New Guinea: Bogadjim (Stephansort); Papua: Milne Bay.

## ACHIAS LATIVIDENS Walker.

*Jour. Proc. Linn. Soc. Lond.*, iii, 1895, 121.

I have before me two males that apparently belong here. The outer cross-vein of the wing is very narrowly and faintly pale brown-clouded and the centre of the face has an entire black stripe. The genal black stripe connects with the short one below the antennal fovea, while the latter does not extend over the fovea, the bottom of the latter being yellow. There are no fine hairs on the scutellum. Fore femur with some irregular short strong posteroventral bristles apically.

One of the specimens is from Milne Bay, from which locality Hendel also had the species; the other is from Ferguson Island, S.E. Papua (A. S. Meek). One male, Fly River, N.G. This specimen is in good condition and shows the long strong yellow hairs on the inner side of the hind coxae very clearly.

Recorded from New Guinea, Aru Island, and Waigou.

## ACHIAS ALBERTISI Osten-Sacken.

*Ann. Mus. Civ. Stor. Nat. Gen.*, xvi, 1881, 473.

Described from New Guinea and not since recorded.

## ACHIAS MICROCEPHALUS Hendel.

*Abhandl. Zool.-botan. Ges.*, viii, 1914, 215.

Described from New Guinea.

## ACHIAS AUSTRALIS, n. sp. Pl. v, fig. 28.

♂, ♀. Head testaceous-yellow, slightly shiny, frons with a broad transverse anterior marginal black band that covers all the eye-stalks except a line on the upper anterior edge and descends on face to almost the level of apex of the third antennal segment, and another similar band on the vertex that is more or less punctiform centrally and on a transverse line behind; a narrower black stripe covers each of the facial foveae and connects with a similar band on the epistomal margin; a third stripe extends from the latter upward on centre of face to between bases of antennae, widening above and below; from the lower edge of the black

eye-stalks there extends downward another black stripe that tapers below and is there somewhat punctiform. Antennae dark brown; palpi black; prelabrum brown; inner mouth margin black. Eyes of male on variably long slender stalks, the entire head at times as long as or longer than the insect, in the female the eye-stalks are much shorter, being at most as long as the thorax and scutellum. Verticals 4, genal weak but evident; face bulging out on its upper half, concave in profile below middle, with the epistome slightly projecting.

Thorax brown, slightly shiny, with grey dust, the mesonotum with slight metallic tinge on dorsum posteriorly, most evident on posterior extremities of the four dark vittae, a fifth vitta evident at posterior extremity between the submedian pair; scutellum glossy dark brown to blue-black, with a grey-dusted transverse mark at base, the disc bare, the margin with 6 bristles on minute raised bases. Mesonotum with the usual bristles: 1 humeral, 2 notopleurals, 1 supra-alar, 2 postalar, 1 intra-alar, a pair of prescutellar acrostichals, and no pleurals; hairs on mesonotum mainly dark except posteriorly and laterally, those on pleura pale.

Legs tawny-yellow, apical half of all femora blackened, bases and apices of all tibiae and a dorsal line black, tarsi black. Fore femora with six or seven short black bristles on the apical third of the posteroventral surface; fore metatarsus not as long as remainder of segments of that tarsus.

Wing (Pl. v, fig. 28) brownish-hyaline, with a dark brown costal stripe that is paler but not obsolescent on a short portion beyond the inner cross-vein, sends a narrow spur on the latter, and ends on apex of fourth vein; outer cross-vein with a slight broad brown suffusion. Halteres brown. Squamae greyish-white, edge of upper one brown. Abdomen brown, semipellucid, with distinct green sheen, most conspicuous apically. Fifth abdominal tergite of male not as long as third and fourth together. Length, 12-14 mm.

Type, male, allotype, and 4 paratypes, Kuranda, Queensland (F. P. Dodd); 1 paratype, Cairns, Queensland, from the Lichtwardt collection. Two of the Kuranda specimens are also from the Lichtwardt collection in the Deutsches Entomologisches Institut; the type and allotype are being returned to Mr. F. H. Taylor.

#### LAMPROGASTER Macquart.

*Dipt. Exot.*, ii, pt. 3, 1843, 211.—*Ceratopelta* Bigot, *Bull. Soc. Ent. France*, viii, ser. 5, 1878, 34.—*Liolamprogaster* Enderlein, *Mitt. Zool. Mus. Berl.*, xi, 1924, 128.—*Holocnemia* Enderlein, op. cit., xi, 1924, 128.

There are probably 50 species of this genus occurring from the Philippines southward to and including Australia. Enderlein in 1924 accepted one of Bigot's genera, *Ceratopelta*, and erected two others for the reception in one case (*Holocnemia*) of a single species, and in the other (*Liolamprogaster*) of three species. *Ceratopelta* is distinguished from *Lamprogaster* by the presence of two stout spines or tubercles on the disc of the scutellum close to the apex, and I have included it in my key to the genera in this paper, though I hardly care to admit the validity of the concept. *Holocnemia* is distinguished from *Lamprogaster* by the presence of stout spines on the ventral surface of the fore femur and long fine hairs on the ventral surfaces of the other femora. The genotype, *apicalis* Walker, is from Western Australia, so that it does not concern us at the present time. *Liolamprogaster* is discussed in the following text.

Lacking as I do a number of the New Guinea species, I have been compelled to adhere quite closely to Hendel's synopsis in the following key to the species,

but I have endeavoured to clarify specific distinctions where the species are in the collection by giving notes on the more outstanding characters under the species.

*Key to the Species.*

1. Scutellum with a pair of short stout pointed processes or tubercles near apex of disc, the margin below these with a number of bristles and setulose hairs .....  
     ..... (*Ceratopelta*) *patula* Walker  
     Scutellum with no apical discal tubercles, with a few marginal bristles ..... 2
2. Wing hyaline or slightly yellowish, usually more noticeably so along the costa, but with no brown or black marks or spots ..... 3  
     Wing with either brown base, more or less complete dark costal streak, or black or brown spots or markings, or at least a dark streak over the inner cross-vein that extends to or almost to the costa ..... 9
3. Mesonotum almost bare on the disc, the microscopic fine hairs confined to series on the acrostichal and dorsocentral lines; abdomen with the composite basal tergite finely haired, the other tergites practically bare; supra-alar bristle lacking; inner cross-vein of the wing at middle of the discal cell; upper occiput more protruded than usual, rather broadly exposed in profile; species orange-yellow, with or without a slight bluish sheen on dorsum ..... *gracilis* Hendel  
     Mesonotum rather uniformly and closely haired on the entire surface; all the abdominal tergites quite closely haired; supra-alar bristle present, or absent (*grossa*); inner cross-vein beyond middle of discal cell of the wing ..... 4
4. Prescutellar acrostichal bristles present; fourth wing-vein straight on its apical section, not arched upward just beyond the outer cross-vein; humeral bristle present; thorax and abdomen reddish, with marked blue tinge (Queensland) ....  
     ..... *pseudoelongata* Malloch  
     Prescutellar acrostichals lacking; fourth wing-vein usually arched just beyond the outer cross-vein and slightly curved upward at apex ..... 5
5. Humeral bristle lacking; fourth wing-vein sinuous proximad of the inner cross-vein; thorax and abdomen brownish-yellow, sometimes with slight bluish sheen on dorsum, the hairs and bristles luteous or yellow ..... 6  
     Humeral bristle present; fourth vein arched or straight proximad of the inner cross-vein; thorax and abdomen either metallic blue or greenish, if brownish-yellow the hairs and bristles black ..... 7
6. Distance between the cross-veins of the wing about equal to the length of the outer one; supra-alar bristle lacking ..... *zelotypa* Hendel  
     Distance between the cross-veins of the wing about 1.5 times as long as the outer cross-vein; supra-alar bristle present ..... *zelotypa* Hendel, var.?
7. Stout yellowish-brown species; gena about half as high as the eye; supra-alar bristle lacking; legs tawny-yellow, each tibia with a brown dorsal line from base to apex ..... *grossa*, n. sp.  
     More slender species, preponderantly metallic blue or green in colour; gena not more than one-fourth as high as eye; supra-alar bristle present; legs fulvous-yellow, with no dark dorsal line on the tibiae ..... 8
8. Epistome with two dark brown stripes in the lower portions of the facial foveae; squamae with red margins ..... *austeni* Sharp  
     Epistome without the above-mentioned black stripes, slightly browned at sides; squamae blackish margined ..... *elongata* van der Wulp
9. Entire costal margin of the wings broadly brown, sometimes yellow beyond inner cross-vein ..... 10  
     Wings without entire dark costal margin ..... 11
10. Outer cross-vein of the wing broadly clouded with brown ..... *stenoparia* Hendel  
     Outer cross-vein of the wing not brown-clouded ..... *basalis* Walker
11. Wing without a dark apical spot ..... 12  
     Wing with a dark apical spot or mark ..... 17
12. Wing with only a large reddish-brown mark at base between the costal and cubital veins ..... 12a  
     Wing never with such large basal mark, but with two or three smaller dark spots on the cross-veins and radius ..... 13
- 12a. Preponderantly metallic-blue species; scutellum with 6 bristles; inner cross-vein near middle of discal cell ..... *basalis* Walker  
     Brownish-yellow species; scutellum with 2 bristles; inner cross-vein less than one-third from apex of discal cell ..... *decolor*, n. sp.

13. Both the cross-veins brown-clouded; thorax and abdomen metallic-green, shagreened and with fine yellow hairs; fore femora green, fore tarsi black . . . . *lacta* Walker  
Outer cross-vein not dark-clouded . . . . . 14
14. Wing with a dark brown costal spot above the level of the outer cross-vein and two others proximad of it on the costa; squamae dark brown . . . . . 15  
Wing without a dark costal spot above level of the outer cross-vein, with only two dark costal spots; squamae pale . . . . . 16
15. Only the inner cross-vein dark clouded; legs entirely reddish-yellow . . . . . 15a  
A short dark streak from the costa to and enclosing the inner cross-vein; bases of fore femora and the tarsi black . . . . . *maculipennis* Macquart
- 15a. Gena one-third as high as eye; prelabrum very exposed; scutellum bare except for the marginal bristles . . . . . *macrocephala* Hendel  
Gena not more than one-fourth as high as eye; prelabrum quite prominently exposed; scutellum strongly haired and with six marginal bristles . . . . .  
. . . . . *fulvipes*, n. sp.
16. Dorsum of thorax, scutellum, and abdomen, glossy, bare, reddish-brown; pleura yellow . . . . . *costalis* Walker  
Thorax and scutellum black, shiny, abdomen greenish-black . . . . .  
. . . . . *trisignata* van der Wulp
17. Wing with three dark brown costal marks; legs entirely yellow; scutellum bare . . . . .  
. . . . . *rufipes* Hendel  
Wing with four dark marks on the costa; tarsi more or less blackened . . . . . 18
18. Outer cross-vein dark-clouded . . . . . 19  
Outer cross-vein not dark-clouded; basal dark wing-spot not extending to costa; thorax and abdomen blue-black; legs yellow . . . . . *punicata* van der Wulp
19. Frons, pleura, and legs reddish-yellow . . . . . 20  
Frons dark brown to black; mesonotum steel-blue, with a short yellowish-white-dusted vitta over the upper half of each humerus extending to suture, and a similar one along the upper edge of each pleuron; abdomen violet-black . . . . .  
. . . . . *quadrilinea* Walker
20. Apical and basal dark spots on the wing very large, the latter extending from subcosta to the anal vein . . . . . *severa* Hendel  
Basal spot on the wing small, extending from posterior basal cell to inner cross-vein; apical spot slender, diffuse . . . . . *taeniata* van der Wulp

## LAMPROGASTER (CERATOPELTA) PATULA Walker.

*Jour. Proc. Linn. Soc. Lond.*, v, 1861, 247.—*L. bispinosa* Walker, op. cit., viii, 1865, 118.—*Ceratopelta tricolor* Bigot, *Bull. Soc. Ent. Fr.*, viii, ser. 5, 1878, 35.

A reddish-yellow species with entirely pale legs and yellowish-hyaline wings, the costal margin deeper yellow, the dorsum of abdomen usually largely steel-blue. The frons, genae, mesonotum, scutellum, and pleura, generally with microscopic black dots on parts of their surfaces. Antennae not extending to lower level of eyes; arista short-haired to beyond the middle; vertex with four bristles. Mesonotum black-haired, pleura largely yellow-haired, the hairs rather long and dense. Bristles as follows: 1 humeral, 2 notopleurals, 2 postalar, 1 pair of dorso-centrals and one mesopleural; the prescutellar acrostichals undeveloped. Scutellum stout, convex, the two tubercles with minute black apices; some of the marginal black bristles on small elevated bases; disc rather long-haired. First posterior cell of the wing narrowed at apex; inner cross-vein slightly dark-clouded. Abdomen broadly ovate, convex on dorsum, fifth tergite of male nearly twice as long as fourth, and with rather long stiff hairs. Length, 12-14 mm.

Dutch New Guinea: Lake Sentani, August 1936, one male (L. E. Cheesman). Originally described from New Guinea. Enderlein recorded it from Dutch New Guinea and accepted the genus as valid. I incline to accept *Ceratopelta* as a subgenus and so treat it here.

## LAMPROGASTER (LIOLAMPROGASTER) GRACILIS Hendel.

*Abhandl. Zool.-botan. Ges.*, viii, 1914, 225.

This species, *costalis* Walker, and *angusta* Enderlein were placed in a new generic concept by Enderlein, the characters used for the segregation being the lack of hairs on the dorsum of the thorax and abdomen, and the slender form, especially of the abdomen. The designated genotype is *angusta*. This species is unknown to me, was very briefly described, and the type locality is Ternate, so we may ignore it here.

I have a male and female that I refer to *gracilis*. The female is considerably darker than the male. In the latter the humeri, lateral margins of the mesonotum, the scutellum and most of the pleura are tawny-yellow, with many microscopic black dots, while in the female these parts are almost entirely blackish-blue. The mesonotum is not entirely bare in the disc, but has a double series of microscopic fine hairs down the centre, and there are some hairs on the sides. The face and prelabrum are fulvous-yellow and speckled with black in both sexes.

As stated by Hendel, the occiput projects behind the eyes in profile more than in the other species of the genus, being as wide above as the parafacial, but whether this character is maintained in the other two species I am unable to state.

The wings are yellowish-hyaline, with a more distinct yellow tinge along the costa as far back as the third vein to its apex. The first posterior cell is not narrowed at its apex.

Papua: Kokoda, 1,200 feet, May, Sept.-Oct. 1933 (L. E. Cheesman). Originally described from Astrolabe Bay, New Guinea.

Both my specimens lack the humeral and mesopleural bristles, and I can detect only one pair of verticals.

## LAMPROGASTER (LIOLAMPROGASTER) COSTALIS Walker.

*Jour. Proc. Linn. Soc. Lond.*, v, 1861, 247; Osten-Sacken, *Ann. Mus. Civ. Stor. Nat. Gen.*, xvi, 1881, 472; Hendel, *Abhandl. Zool.-botan. Ges.*, viii, 1914, 231.

Osten-Sacken states that Walker's description is "recognizable", but considers that the species seems to be closely allied to *superna* Walker and *quadrilinea* van der Wulp, the former of which was unknown to Hendel. I have not seen either of those species.

Hendel states that the dorsa of the thorax and abdomen are bare and, as Enderlein had apparently seen neither *angusta* Hendel nor *costalis*, it may be assumed that he placed them in his new genus *Liolamprogaster* on the basis of Hendel's statement to that effect. Hendel makes no mention of the occiput being convex and it may be assumed to be as in typical species of *Lamprogaster*. The wing has three short brown streaks on the costa, the outermost one being above the level of the outer cross-vein.

Hendel described a variety *nuda* which differs from the typical form in lacking the two grey-dusted pleural vittae, in having the apex of the scutellum almost transverse, and a slight dark cloud on the outer cross-vein.

Described from New Guinea. Recorded from Dorey (O.S.), and Huon Gulf (Hendel).

## LAMPROGASTER (LAMPROGASTER) ZELOTYPA Hendel.

Op. cit., viii, 1914, 226.—*L. ventralis* Walker, *Jour. Proc. Linn. Soc. Lond.*, v, 1861, 248.

I give the above citation from Hendel's paper on the group without comment.

A glossy fulvous-yellow species, with yellow or fulvous hairs and bristles, and yellowish-hyaline wings, with a less markedly intense yellow costal border than in *gracilis*, the yellow colour not extending very noticeably over the second vein. There are no microscopic black specks on the head and thorax as in *gracilis*. The upper occiput is much narrower in profile, the vertex has four fine dark bristles, the mesonotum and scutellum are quite densely short-haired, the latter has 4 marginal bristles, the humeral is lacking, but the mesopleural is present. Dorsum of the abdomen rather densely short-haired.

Papua: Kokoda, 1,200 feet, August 1933 (L. E. Cheesman). Recorded previously from Dorey, New Guinea, and Australia.

The variety of this species listed in the key is from Cairns, Queensland.

LAMPROGASTER (LAMPROGASTER) GROSSA, n. sp.

♂. A large robust species of a general yellowish-brown colour, with fuscous frons, the thorax appearing darker brown because of the presence of many minute black dots visible only under a strong lens, the abdomen infuscated, especially apically, and no trace of any metallic sheen. Wings yellowish-tinged, darker basally, the inner cross-vein and the stigma brown-clouded.

Frons at vertex about two-fifths the head-width, almost parallel-sided and about 1.25 times as long as wide, with many short pale surface hairs, the orbits narrow, densely yellowish-grey tomentose, which tomentum is carried down on the parafacials, narrowing below; vertex in type specimen with 6 fine black bristles, the inner pair duplicated. Antennae hardly more than half the length of face, third segment fully three times as long as wide; arista pubescent on basal half, simple at apex; palpi longer than antennae, slender. Facial carina with sharp edges, the foveae deep; prelabrum poorly developed, not heavily chitinous. Gena about half as high as eye. Face and genae black dotted, the latter with blackish marginal line; occiput narrowly visible above in profile; parafacial in profile wider than third antennal segment.

Mesonotum in type specimen with the black dots lacking on four wide contiguous vittae, the central pair not attaining posterior margin, rounded at extremities; surface quite densely covered with short decumbent black hairs; bristles as follows: 1 humeral, 2 notopleurals, 2 postalars, and 1 pair of dorso-centrals. Scutellum slightly convex above and rounded in outline, with many short black discal hairs and six marginal bristles. Pleura partly black dotted, pale haired; mesopleural bristle of moderate length.

Wings large, veins brown, yellow clouds in cells of basal half. Fourth vein near base of discal cell slightly angulate and with a short spur vein on its anterior edge; inner cross-vein a little beyond middle of the discal cell; fourth vein very slightly bent up beyond outer cross-vein. Squamae and halteres pale brown. Legs rather stout, brownish-yellow, all the tibiae with a brown dorsal line. Fore femora without posteroventral bristles. Abdomen short ovate, blackened apically. Fifth tergite about as long as the third and fourth combined. Length, 13 mm.

Type, Dutch New Guinea: Cyclops Mts., Mt. Lina, 3,500 feet, March 1936 (L. E. Cheesman).

LAMPROGASTER (LAMPROGASTER) QUADRILINEA Walker. Pl. v. fig. 29.

*Jour. Proc. Linn. Soc. Lond.*, iii, 1859, 111.—*L. sepsoides* Walker, op. cit., vii, 1864, 220; Hendel, *Abhandl. Zool.-botan. Ges.*, viii, 1914, 242.

A metallic black-blue species, with three narrow black costal streaks, the basal one not extending to costa, the middle one at the stigma and enclosing the inner

cross-vein, and the outer one above level of the outer cross-vein, a narrow black edge from midway between apices of second and third veins to apex of fourth, a narrow cloud over the outer cross-vein, and a spot on cross-veins at base of discal cell that connects with a basally directed streak in basal half of anterior basal cell. The mesonotum is closely piliferous-punctate, the very short depressed pile black, and has a yellowish-white-dusted vitta over the upper half of each humerus extending to the suture, and one on upper edge of the pleura; scutellum slightly alutaceous, not punctate, bare on disc, with a few fine hairs and four or six weak bristles on sides, the apex truncate. Mesopleural and humeral bristles lacking. Legs black, mid and hind tibiae and tarsi largely brownish-yellow, fore femora sometimes brownish at bases.

New Guinea: Wewak (F. H. Taylor). Thirteen specimens; two pairs taken *in copula*. Western New Guinea: Njau-limon, south of Mt. Bougainville, 300 feet, February 1936; Eastern Dutch New Guinea: Jutefa Bay, sea level, 100 feet, February 1936, four specimens (L. E. Cheesman).

Originally described from Aru Island, and recorded from Mysol, Waigou, and New Guinea.

LAMPROGASTER (LAMPROGASTER) SEVERA Hendel.

Op. cit., viii, 1914, 240.

Originally described from New Guinea and not since recorded.

Scutellum bare.

LAMPROGASTER (LAMPROGASTER) MACULIPENNIS Macquart.

*Dipt. Exot.*, Suppl. ii, 1847, 89.

This Australian species may be found in New Guinea.

LAMPROGASTER (LAMPROGASTER) TRISIGNATA van der Wulp.

*Tijdschr. v. Ent.*, xxviii, 1885, 231.

Described from New Guinea and not seen by Hendel. Unknown to me.

LAMPROGASTER (LAMPROGASTER) AUSTENI Sharp.

Zool. Res. on material from New Britain, etc., Cambridge, Arthur Willey, pt. iv, 1900, 391.—*Lamprogaster xanthoptera* Hendel, *Abhandl. Zool.-botan. Ges.*, viii, 1914, 225.

I have arrived at the above synonymy after a careful examination of a long series of specimens from the Solomon Islands submitted to me by Sir Guy A. K. Marshall of the Imperial Institute of Entomology and a comparison with a specimen from New Britain, the type-locality.

There can be no doubt as to the correctness of the determination, though it is in only a few cases possible to see the large sack-like abdominal expansions of the abdomen described and figured by Sharp in his paper. In one female, however, these are widely exposed and agree well with Sharp's figure.

LAMPROGASTER (LAMPROGASTER) RUFIPES Hendel.

*Abhandl. Zool.-botan. Ges.*, viii, 1914, 233.

Scutellum bare.

Described from New Guinea, Key Island.

LAMPROGASTER (LAMPROGASTER) PUMICATA van der Wulp.

*Tijdschr. v. Ent.*, xxviii, 1885, 230.

Described from New Caledonia. Unknown to Hendel and myself. May occur in New Guinea.

## LAMPROGASTER (LAMPROGASTER) BASALIS Walker.

*Jour. Proc. Linn. Soc. Lond.*, v, 1861, 248.—*L. limbata* van der Wulp, *Tijdschr. v. Ent.*, xxviii, 1885, 228.

I have before me two specimens that agree very well with the description of this species, though they have not the mesonotum, scutellum, and abdomen particularly long black-haired as stated by Hendel.

The mark on the anterior half of the base of the wing up to and including the inner cross-vein is quite dark brown, and beyond that point on the costal margin back as far on to the field of the wing as the third vein and to the apex of the latter there is a distinct yellow streak. The thorax and abdomen, except the apex of the latter and the pleural sutures, are glossy metallic-blue. In the female before me the legs, except the mid and hind coxae, are orange-yellow, while in the male the femora all have a blackish streak on their basal half or less on ventral surface.

The vertex has 4 strong bristles; the humeral and supra-alar bristles are lacking; the scutellum has six marginal bristles and, like the mesonotum, is rather long black-haired on the disc. Inner cross-vein a little beyond middle of the discal cell, the outer one twice its own length from inner one; fourth vein undulated proximad of the inner cross-vein, highly arched just beyond outer one, then almost parallel with third to its apex.

Known only from New Guinea. East Dutch New Guinea, Jutefa Bay, Pim, sea-level to 100 feet, February 1936 (L. E. Cheesman).

I have no doubt about the synonymy given above, though Hendel kept the species separate. He did not have *limbata* before him and merely quoted van der Wulp's description.

## LAMPROGASTER (LAMPROGASTER) DECOLOR, n. sp. Pl. v, fig. 30.

♀. Very similar to *zelotypa* in general colour, the blue metallic sheen not very conspicuous on the fulvous-yellow ground-colour, most evident on the pleura. The main differences between the two lie in the presence of a brown cloud over the base of the wing from costal margin to anal vein and extending to apices of first posterior and anal cells, most noticeable on the cross-veins at the apices of these cells, a faint brown cloud over inner cross-vein, the more approximated cross-veins, which are usually separated by less than the length of the outer cross-vein. The genae are also much darkened, usually dark brown. The vertex has four bristles in both species, very small and fine in *decolor*, and in the latter there are but two marginal bristles on the scutellum. The thoracic bristles are also darker than in *zelotypa* though not black. Length, 7-11 mm.

Type and 7 paratypes, Wewak, New Guinea (F. H. Taylor).

## LAMPROGASTER (LAMPROGASTER) STENOPARIA Hendel.

*Abhandl. Zool.-botan. Ges.*, viii, 1914, 227.

This species has much in common with *basalis* Walker, but the wing markings to the apex of the costal streak, including a conspicuous cloud over the outer cross-vein, are dark brown.

Originally described from North Queensland and very possibly will yet be found in New Guinea.

## LAMPROGASTER (LAMPROGASTER) ELONGATA van der Wulp.

*Tijds. v. Ent.*, xxviii, 1885, 228.

A common species in New Guinea though not in this collection. Recorded also from Key Island and Molucca. Papua: Itikinumu Plantation (F. P. Dodd).



## LAMPROGASTER (LAMPROGASTER) MACROCEPHALA Hendel.

*Abhandl. Zool.-botan. Ges.*, viii, 1914, 230.

This species is described by Hendel as the most robust species known to him, with an exceptionally large head. It must resemble *grossa* described herein, but the parafacial is wider, about twice as wide as the third antennal segment, and the gena is more than half as high as the eye. In addition to these differences the scutellum is bare on disc, and the wing has a large black-brown mark on the base and the inner cross-vein blackened.

Described from New Guinea and not known to me except from the description.

## LAMPROGASTER FULVIPES. n. sp. Pl. v, fig. 31.

♂. Head brown, frons pitchy-black, shiny, with yellowish-dusted line on each side widened in front and carried down over the parafacials, the latter and the genae dark brown, the parafacials glossy on anterior edges. Frons subquadrate, almost half as wide as head; vertex with four moderately strong bristles, the short glossy upper orbits with a bristle; surface hairs short and dark. Face produced slightly below, concave centrally in profile, with irregular transverse striae on upper half. Antennae extending to below middle of face; arista short-haired to near middle; palpi reddish-yellow, slightly club-shaped, with some fine black bristles on sides. Thorax metallic-blue, without vittae or dust on mesonotum, the pleura slightly brown-dusted. Mesonotum and scutellum with quite dense depressed stiff black hairs, longer on the sides. Humeral, both notopleurals, the supra-alar and postalar bristles present, mesopleural fine but distinct; scutellum short, thick, rounded in outline, convex on disc. Legs fulvous-yellow, without exceptional structure or armature.

Wings yellowish, as usual more distinctly so costally, with a rather faint blackish streak from over inner cross-vein extending towards costa, most marked on the former, and a small dark brown mark on fork of second and third veins; stigma brownish-yellow. Inner cross-vein close to middle of the discal cell; venation as in *pseudoelongata* Malloch, second vein in type specimen with a few setulae on upper side on basal half (Pl. v, fig. 31). Squamae and halteres brownish-yellow. Abdomen deep metallic-blue, glossy, with rather long black hairs. Length 7.5 mm.

Type, New Guinea: Marprik (J. R. Rigby and C. M. Deland). Type in the collection of the School of Public Health and Tropical Medicine, University of Sydney.

## LAMPROGASTER LAETA Walker.

*List Dipt. Ins. Brit. Mus.*, pt. iv, 1849, 805 (*Chromatomyia*).

Hendel placed this species in his key to the species of this genus, but stated that he believed it belongs to *Duomyia*. It is an Australian species and he is probably correct in his conclusion, though I have not seen the insect.

## LAMPROGASTER (LAMPROGASTER) TAENIATA van der Wulp.

*Tijds. v. Ent.*, xxviii, 1885, 229.

Described from Molucca and not known to Hendel or myself, except from description.

## EUPROSOPHA Macquart.

*Dipt. Exot.*, Suppl. ii, 1847, 89.

In 1881 Osten-Sacken proposed the generic name *Notopsila* to supplant *Pachycephala* Doleschall, the latter name being preoccupied, the genotype named

being *mohnikei* Doleschall. In 1924 Enderlein proposed for this same concept the name *Oncoscellia*, again as a substitute for *Pachycephala*, apparently having overlooked Osten-Sacken's previous action. In 1931 I dealt with this matter briefly and, in addition, singled out certain segregates of *Euprosopia* without proposing the use of distinguishing names for any of them. Enderlein went farther than Osten-Sacken and erected the genus *Lepidocompsia* for the reception of two New Guinea species, *impingens* Walker and *fusifacies* Walker. The characters used to distinguish this concept consisted of the presence of broad spindle-like scales on the abdomen, and of long hairs on the entire extent of the arista. He also proposed a new genus, *Tetrachaetina*, for a new species, *burgersiana*, and *E. brevicornis* Hendel, the distinguishing character being the 4-bristled scutellum. His new species was from New Guinea (see under *innocua*, n. sp.).

It must be obvious that the proposal of new genera, on the basis of characters such as those listed and used by Enderlein for his new concepts in a genus that contains such a large number of species with all sorts of combinations of these and similar characters, places no limit upon the number of genera that may be suggested except the number of species involved. The application of such criteria necessarily renders valueless such generic concepts insofar as indices to relationships are concerned. I therefore do not make use of Enderlein's genera herein.

Below I present a key to the species of *Euprosopia* from New Guinea.

*Key to the Species.*

1. Thorax dull brownish-black, with five golden-yellow vittae, three on the mesonotum and one on each pleuron; the abdomen brownish-black, with a dorsocentral parallel-sided bright yellow vitta ..... 2  
 Thorax and abdomen not vittate with bright yellow ..... 3
2. Wing greyish-hyaline with three narrowly separated black or brown fasciae on the apical half that are fainter and slightly attenuated behind, the basal one connected near the costa with a streak from base of wing in the subcostal cell and the preapical one connected with an apical blackish spot; arista of the male slightly widened at apices; vertex with two bristles .. *tigrina* Osten-Sacken  
 Wing with numerous small fuscous spots basally, becoming more numerous to middle, and from there to apex the membrane dark brown, with a few transverse linear hyaline streaks in the field, two series of the latter forming slightly interrupted fasciae between the outer cross-vein and the tip; arista of male hair-like at apices; vertex with two bristles and two short fine hairs ..... *aureovitta*, n. sp.
3. Scutellum more or less distinctly emarginate or concave at apex; abdomen yellowish-red in ground-colour, with ochre-yellow dusting; inner vertical bristles lacking, outer pair very small; arista haired, not spatulate at apices in male; scutellum with 6 marginal bristles ..... *rufiventris* Hendel  
 Scutellum regularly rounded at apex; abdomen black or blackish-brown ..... 4
4. Wings dark brown, with many small hyaline or yellowish transverse marks in the cells extending in most cases entirely across the cell, sometimes almost or entirely divided centrally and then forming two series of small spots against the veins; small species usually much less than 7 mm. in length ..... 4a  
 Wings either hyaline with entire or broken dark fasciae, or with brown or black spots; species normally much more than 7 mm. in length ..... 7
- 4a. Only 3 or 4 hyaline marks in first posterior cell, which extend entirely across the cell; fore femur (♀) with 2 or 3 short stout preapical bristles on the posteroventral surface; fifth vein bare above; prescutellar acrostichals lacking; pleura without yellow-dusted vittae ..... *minuta*, n. sp.  
 More numerous hyaline marks in first posterior cell, mainly consisting of small paired spots opposite each other against the veins; fore femur with some fine bristles on the apical half or more of the posteroventral surface; prescutellar acrostichals present; pleura with one or more golden-yellow-dusted vittae ... 5

5. Fifth wing-vein closely setulose on the entire extent of posterior basal and discal cells above; pleura with a short golden-yellow vitta on upper margin and a complete similarly coloured vitta on lower margin of mesopleura; vertex with four bristles, the inner pair the shorter ..... *setinervis*, n. sp.  
 Fifth vein not setulose above on entire extent of posterior basal and discal cells; pleura with a complete golden-yellow central vitta and a short one on upper margin and a third one on upper edge of the sternopleura ..... 6
6. Vertex with four strong bristles ..... *miliaria* Hendel  
 Vertex with but two strong bristles ..... *dubitalis*, n. sp.
7. Face with a black or dark brown streak on each side, at least from the antennal fovea to the epistome ..... 8  
 Face yellow or grey, without a black streak on each side from antennal fovea to the epistome ..... 10
8. No dark vitta over the middle of the discal cell of the wing; palpi black; scutellum with 4 marginal bristles; abdomen of the male without yellow lanceolate scales; wing with two outstanding dark fasciae among the other markings, the inner one wide on the costa and falling over the outer cross-vein, the outer one narrower and not extending to the hind margin, the apex with a rounded black spot, the basal half with numerous small dark spots in the cells ..... *bilineata* de Meijere  
 A dark vitta extending over the inner cross-vein and the middle of the discal cell of the wing, other characters of markings not as above ..... 9
9. The dark fascia over the outer cross-vein connected with the preapical one before attaining the hind margin of the wing; inner vertical pair of bristles lacking; arista of the male without an apical palette ..... *impingens* Walker  
 The two dark fasciae above referred to not connected behind; inner vertical pair of bristles present; arista of male with a lanceolate apical palette ..... *fusifacies* Walker
10. Tarsi entirely black, or at most only the base of the mid metatarsus brownish .... 11  
 At least all the metatarsi except their extreme tips yellow ..... 13
11. The dark fascia over the outer cross-vein of the wing broken into small spots costally; legs except the tarsi yellow, the femora brownish marked on both sides below at apices; mid metatarsi reddish-brown at bases; fore tibiae of male with a small brush of short thick setulae at apex on the posteroventral surface ..... *penicillata* Hendel.  
 The dark fascia over the outer cross-vein of the wing as in *penicillata*, but the femora almost entirely black ..... *innocua*, n. sp.  
 The dark fascia over the outer cross-vein of the wing complete ..... 12
12. Mesonotum whitish-grey-dusted, with two broad blackish vittae ..... *albolineata* de Meijere  
 Mesonotum olive-grey-dusted, with seven narrow indistinct dark vittae ..... *protensa* Walker
13. Abdominal tergites with pale brown preapical or central fascia; hind femora slightly emarginate or concave below centrally ..... *potens* Walker  
 Abdominal tergites with four brown discal spots; hind femora slightly thickened, not emarginate or concave below centrally ..... *ventralis* Walker

*N.B.*—There are several species that occur in Australia and in some of the adjacent islands that may yet be found in New Guinea. It will thus be necessary to take these into consideration in making identifications in the genus. One such species that is closely similar to *impingens* occurs in the Solomon Islands and may occur also in the territory now under consideration.

EUPROSOPIA TIGRINA Osten-Sacken.

*Ann. Mus. Civ. Stor. Nat. Genov.*, xvi, 1881, 473.

The golden-yellow vittate thorax is not unique for this species in this genus, there being several others with that character known to me, but, taken in conjunction with the dark vittate wing, the characters readily separate it from any other now before me.

Known only from New Guinea. I have seen specimens, but have none before me at this time.

## EUPROSOPIA RUFIVENTRIS Hendel.

*Abhandl. Zool.-botan. Ges.*, viii, 1914, 334.

This is the only species of the group with emarginate apex to the scutellum known from New Guinea. I have seen one of the group from the Solomon Islands and several from Malaya.

Described from New Guinea and not subsequently recorded.

## EUPROSOPIA MINUTA, n. sp. Pl. v, fig. 32.

♀. The smallest species of the genus known to me, distinguished from all the others by the blackish-brown wings with their transverse hyaline markings in the cells (Pl. v, fig. 32).

Head brownish-yellow, occiput fuscous, with grey dust, frons red on each side of central stripe except in front, the orbits and triangle grey-dusted; antennae yellowish-brown; face with a small dark spot on epistome below and slightly mesad of each fovea, the prelabrum with a similar spot on each side; palpi orange, with dark tips. Frons at vertex not depressed, about one-third of the head-width, a little more than that in front, and about 1.25 times as long as its anterior width; vertex with four bristles. Antennae about two-thirds as long as face, third segment about three times as long as wide; arista very short haired on basal fourth or less. Edges of facial carina not sharp. Gena about one-sixth as high as eye.

Thorax dull black, quite densely grey-dusted, mesonotum with five dark brown irregular vittae, submedian pair broken at suture and notched on inner edge behind suture, the sublateral pair broken at suture. Pleura pale-grey-dusted, dull black above; scutellum with a large dark brown discal spot. Hairs black, rather strong on pleura. Bristles as follows: 1 humeral, 2 notopleurals (and some long setulae at base of the posterior one), 2 post-alars, and a pair of dorsocentrals; scutellum convex on disc, rounded in outline, with numerous dark discal hairs and 4 marginal bristles. Legs black, hind tibiae centrally sometimes brownish, all metatarsi except the extreme apices whitish-yellow.

Wings brownish-black, marked as in Plate v, figure 32. Stigma entirely brown, nearly as long as the third section of the costa; fourth vein almost straight on apical section, its tip almost imperceptibly turned up; inner cross-vein at about one-third from base of discal cell; fifth vein bare above. Squamae brown. Halteres yellow. Abdomen black, dull, grey-dusted at bases of the tergites. Genital cone very broadly leaf-like. Length, 4 mm.

Type and 1 paratype, Papua: Kokoda, 1,200 feet, August 1933 (L. E. Cheesman).

## EUPROSOPIA MILIARIA Hendel.

*Abhandl. Zool.-botan. Ges.*, viii, 1914, 353.—*Platystoma pectorale* Walker, *Jour. Proc. Linn. Soc. Lond.*, vi, 1862, 13.—*Euprosopia diminutiva* de Meijere, *Nov. Guin.*, ix, Zool. livr. 3, 1913, 368.

The above synonymy is that given by Hendel in his work on the Platystominae, but I have some doubts as to the correctness of his deductions. Until I had the opportunity of examining the present collection I considered there was but one small species with the peculiar type of wing markings shown for *miliaria* by Hendel (Pl. 2, fig. 41). Now I have four very similar species, three of which are dealt with herein.

Hendel's species I have been able to determine from his photograph of the wing and his statement that there are four strong vertical bristles and three

golden-yellow-dusted vittae on the pleura. One specimen agreeing with these characters, a male, is before me. It has a lanceolate apical arista, and there are some very short hairs or pubescence on the basal fifth of the upperside of the arista. Hendel gives the arista as bare. The fifth ventral segment of the abdomen is furnished with a clump of about 8 downwardly-directed black bristles on each side at apex, a character found in two of the other closely allied species of which I have males. The hairs on the underside of the basal section of the stem vein of the wing are indistinguishable in *miliaria*, and there are no setulae on the upperside of the fifth vein along the discal cell, but the latter may have been rubbed off. The extreme apex of the first posterior cell is dark brown.

Originally described from Isle of Lakes in the Papuan region. One male. New Britain (Dr. Heydon).

*EUPROSOPIA DUBITALIS*, n. sp. Pl. v, fig. 33.

♂, ♀. Very similar to *miliaria* as above accepted, differing essentially as follows: Vertex with but the two outer bristles present; basal section of stem vein of the wing with short fine hairs below. Both species have a transverse series of bristles on the hind margin of the mesonotum, the outer one on each side being the posterior postalar, the others the dorsocentrals and prescutellar acrostichals. Length, 5-6.5 mm.

Type, male, Aitape, Oct.-Nov. 1936 (L. E. Cheesman), allotype, Vanimo (F. H. Taylor), New Guinea.

*EUPROSOPIA SETINERVIS*, n. sp. Pl. v, fig. 34.

A smaller and darker species than either of the other two, with wing markings more distinctive (Pl. v, fig. 34), and only two golden-dusted pleural vittae.

♀. Face largely blackened, and the third antennal segment darkened above. The latter is shorter than in the other two species and the arista is much more distinctly haired, the longest hairs on the basal fifth being about half as long as the width of the third antennal segment. Vertex with four bristles, the inner pair the shorter. Gena about one-tenth as high as the eye. Mesonotum much darker than in the other two species, the yellowish-grey-dusting less dense and the seven dark vittae inconspicuous. Bristling as in *miliaria*, the hairs on disc of mesonotum and on most of the pleura dark, those on the pteropleura and the margins of the mesonotum and scutellum yellow. Legs black, basal two-thirds of all tibiae fulvous-yellow, all metatarsi except their extreme apices whitish-yellow.

Wings dark brown, with many small hyaline spots, becoming short transverse streaks in the cells apically (Pl. v, fig. 34). First, third and fifth veins closely setulose above, the fifth on the entire extent of posterior basal and discal cells, third more widely setulose below almost to its apex; first posterior cell slightly narrowed at apex. Halteres yellow. Abdomen shiny black, with less dense grey-dusting than in the other two species, the dust most distinct across bases of the tergites, each tergite with a large poorly-defined black mark on each side, hairs and bristles black. Length, 5 mm.

Type, West New Guinea: Mt. Nomo, south of Mt. Bougainville, 700 feet, February 1936 (L. E. Cheesman).

This is the only species known to me in this genus in which the fifth vein is setulose on the extent of the posterior basal and discal cells.

*EUPROSOPIA BILINEATA* de Meijere. Pl. v, fig. 35.

*Nov. Guin.*, v, Zool. livr. 1, 1906, 92; *op. cit.*, ix, 1913, 367.

Originally described from New Guinea and not since recorded. One male which I refer here agrees with the rather brief description. The frons has a narrow brown central vitta, the face has a rather broad dark brown streak in the lower half of each fovea that extends over the sides of the prelabrum. The antennae descend to lower level of the eye, and the aristaе are long-haired on their basal halves. There are but two vertical bristles. Thorax quite densely whitish-grey-dusted, the mesonotum with two uniformly wide black vittae that extend over the sides of the scutellum, pleura entirely grey-dusted. Scutellum with two short and two long apical bristles. Abdomen entirely pale-grey-dusted, quite densely covered with moderately long whitish-yellow hairs and without scales. Legs with the exception of the yellowish basal halves of the tibiae entirely black. Wings as in *fusifacies*, but the fascia proximad of the one over the outer cross-vein is broken into numerous spots and the apical spot is but narrowly or not at all connected with the preapical fascia; the markings are also paler than in *fusifacies* and *impingens*.

Dutch New Guinea: Cyclops Mts., Sabron, 930 feet, April 1936 (L. E. Cheesman); New Guinea: Marprik (C. M. Deland and J. R. Rigby) one female; Papua: Mt. Lamington (Northern Division) one specimen, July 1927 (C. T. McNamara).

EUPROSOPIA PROTENSA (Walker). Pl. v, fig. 36.

*Jour. Proc. Linn. Soc. London*, vii, 1864, 228 (*Platystoma*).

New Guinea: Vanimo, Wewak (F. H. Taylor).

EUPROSOPIA POTENS (Walker). Pl. v, fig. 37.

*Op. cit.*, vi, 1862, 12 (*Platystoma*).

This species has the face yellow, the thoracic dorsum olive-grey-dusted, with three, five, or seven, narrow dark vittae, and the abdomen with a pale brown fascia near the apex of each tergite, usually quite indistinct. The wings are hyaline, with a slight yellowish tinge, and numerous almost evenly distributed pale brown spots. There is no noticeable anterior prolongation of the tegulae, the scutellum has six bristles, the anterior pair rather high-placed. There are no scales on the dorsum of the abdomen in either sex.

New Guinea, Key Is., Ternate, Gilolo, and Molucca. A long series from Wewak, New Guinea (F. H. Taylor); four specimens, Dutch New Guinea, Cyclops Mts., Sabron, 930 feet, April-June 1936 (L. E. Cheesman).

EUPROSOPIA VENTRALIS (Walker). Pl. v, fig. 38, 39.

*Op. cit.*, iii, 1859, 131 (*Lamprogaster*).

I have a female that I refer here, though the character of the maculation of the dorsum of the abdomen is not distinguishable owing to its being crushed. However, from the citation of other characters by Hendel, I am certain that my identification of the species as the one he accepted as *ventralis* is correct. The thorax and abdomen are darker in ground-colour, with the black interrupted vittae on the former much more developed. The small black spot at the apex of the subcostal vein is larger and more intense than in *potens*, and there is a short blackish streak over the inner cross-vein that is not present in that species, there being only a short transverse line through the vein. The preapical blackish fascia on the wing in *ventralis* is also entire, the one over the outer cross-vein is almost so and both are darker and more definitely fasciform than are the rather broken markings in *potens*. In neither sex is the hind femur concave below, and the

mid and hind pairs are more noticeably browned apically than in *potens*. Though it may not be constant, I may mention that in my specimen of this species the inner pair of vertical bristles is much smaller and more incurved than in the females of *potens* before me.

Originally described from Key Island, and subsequently recorded from New Guinea by Hendel. One female, Dutch New Guinea; Cyclops Mts., Sabron, Camp 2, 2,000 feet, May 1936 (L. E. Cheesman).

EUPROSOPIA IMPINGENS (Walker). Pl. v, fig. 40.

Op. cit., viii, 1865, 134 (*Platystoma*).—*Euprosopia fusifacies* de Meijere, *Nov. Guin.*, v, Zool. livr. 1, 1906, 92; op. cit., ix, Zool. livr. 3, 1913, 367; Edwards, *Trans. Zool. Soc. Lond.*, xx, pt. 13, 1915, 416.

The black mark on either side of the lower edge of the face, and the conspicuous V-shaped black mark on the apical third of the wing, which has both extremities widened, readily distinguishes this species from its nearest allies. The tegulae are not at all produced forward and the aristaes are long-haired on their basal two-thirds. Abdomen with many yellow lanceolate scales on the dorsum.

Described from New Guinea. Two females, Kavieng, and Put Put, New Ireland (F. H. Taylor), and four from Dutch New Guinea: Cyclops Mts., Sabron, 930 feet, May–June 1936 (L. E. Cheesman).

EUPROSOPIA FUSIFACIES (Walker). Pl. v, fig. 41.

Op. cit., iii, 1859, 113 (*Platystoma*); Osten-Sacken, *Ann. Mus. Civ. Stor. Nat. Gen.*, xvi, 1881, 473.—*Euprosopia squamifera* de Meijere, *Nov. Guin.*, ix, Zool. livr. 3, 1913, 368.

This species is very similar to the preceding, but differs in having the fasciae of the wings as stated in the foregoing key to the species. Both sexes have lanceolate scales on the dorsum of the abdomen.

Originally described from Aru Islands and subsequently from New Guinea. A pair, Papua: Kokoda, 1,200 feet, April 1933 (L. E. Cheesman); Mt. Lamington (Northern Division), five specimens (C. T. McNamara).

EUPROSOPIA PENICILLATA Hendel.

*Abhandl. Zool.-botan. Ges.*, viii, 1914, 343; Edwards, *Trans. Zool. Soc. London*, xx, pt. 13, 1915, 416.

Very like *potens* Walker, differing as specified in the foregoing key to species.

Described from New Guinea: Huon Gulf; Dutch New Guinea: Wataikwa River. Unknown to me except from the description.

EUPROSOPIA AUREOVITTA, n. sp. Pl. v, fig. 42.

♂, ♀. Readily distinguished from any other species of the genus by the dull brownish-black thorax with the three broad densely yellow-dusted mesonotal vittae, the central one continued over the scutellum and the others sublateral and continued down over the postalar declivities, and the single similarly-dusted vitta on the pleura from below the anterior spiracle to the posterior margin of the pteropleura. Wing dark brown, with hyaline spots in the cells, becoming sparser and smaller apically (Pl. v, fig. 42).

Head brownish-yellow, with a yellowish-white-dusted line round the entire eye-margins, centre of frons reddish-brown, face with a brown line from lower part of each antennal fovea to epistome, occiput largely grey; third antennal segment brown above; palpi brown at tips. Antennae extending about two-thirds of the distance to epistome; aristaes short-haired on basal fifth or less, without an

apical palette in either sex. Outer pair of vertical bristles strong, inner pair short and fine. Height of head barely greater than its greatest width in front; frons slightly narrowed and a little depressed above, about 1.5 as long as wide; gena about one-eighth as high as eye.

Thorax of male with the following bristles: 1 humeral, 2 notopleurals, 1 supra-alar, 2 postalar, and 1 pair of dorsocentrals, the prescutellar acrostichals lacking; scutellum with 4 bristles, the outer pair well in front of the apicals and rather highly placed. In the female the humeral is minute and the notopleurals are hardly larger, the posterior one being directed forward and upward. Tegulae of male normal, those of the female rather noticeably produced forward. Hairs black, yellow on central yellow vitta and on the pteropleura. Legs black, femora grey-dusted, fore coxae and basal two-thirds or more of all tibiae brownish-yellow, all metatarsi whitish-yellow except their apical fifth. Fore femur with a series of posterodorsal bristles and a few finer bristles on the apical half of the posteroventral surface.

Wings as in Plate v, figure 42. No costal bristle at the break basad of the humeral cross-vein, nor hairs on the underside of the stem vein on its basal section; fourth vein slightly forwardly bent at apex, inner cross-vein oblique. Halteres yellow. Squamae brownish-yellow, edge of the upper one with narrow black line. Abdomen blackish-brown, dull, with a broad, complete dorsocentral vitta of yellow dust, the hairs on latter yellow, on sides black. Length, 7 mm.

Type male, and allotype, Papua: Mafulu, 4,000 feet, December 1933 (L. E. Cheesman).

*EUPROSOPHA INNOCUA*, n. sp. Pl. v, fig. 43.

♂, ♀. This species belongs to that group in which the aristae are pubescent on their basal fifth or less, the scutellum has four bristles, and there are no lanceolate scales on the dorsum of the abdomen in either sex. The entirely black tarsi are distinctive.

Head brownish-yellow, the usual grey-dusted line against the eye-margins, face sometimes brownish centrally. Antennae ferruginous, with the third segment brown above; the palpi darkened at apices. Frons narrowed above, about 1.25 times as long as its greatest width, the latter exceeding one-third of the head width. Vertex with 4 strong bristles. Arista of the male with a small broad apical palette. Gena about one-fourth the eye-height.

Thorax brownish-black, pleura paler, mesonotum with greyish-brown dust and 7 inconspicuous dark vittae, the central one entire and most evident, the next pair broken between suture and hind margin, the outer pair obsolete before suture; mesopleura with a brown central mark. Hairs black. Bristles as follows: 1 humeral, 2 notopleurals, 1 supra-alar, 2 postalars (the outer one sometimes duplicated in the female), 1 pair of dorsocentrals, and 1 pair of prescutellar acrostichals. Scutellum with 4 bristles as in the preceding species. Suprasquamal ridge haired in centre. Legs black, mid and hind femora usually reddish-brown in part, at least the mid and hind tibiae reddish-brown except apically. Fore tibia of male with a yellow subnude stripe on the anteroventral surface except at base and apex, the posteroventral surface with dense short slightly lanceolate black bristles on apical sixth. Posteroventral bristles on fore femora of female stronger than in the male. Tarsi black.

Wings greyish-hyaline, with numerous brownish-black spots (Pl. v, fig. 43). Stem vein with some fine hairs below on basal section, costa with a fine bristle below at basal break; fourth vein bent forward at apex; inner cross-vein oblique;



outer cross-vein enclosed in a dark spot. Halteres yellow. Squamae brown, edge of upper one fuscous. Abdomen black, densely olive-grey-dusted, usually with a faint narrow dark apex to tergites 3 and 4 and a brownish central fascia on fifth tergite. The hairs dense, short, and black, longer and yellow on centre and sides of the basal composite tergite. Length, 11–13 mm.

Type, male, allotype, and 7 paratypes, Dutch New Guinea: Cyclops Mts., Sabron, 930 feet, May 1936 (L. E. Cheesman).

It is possible that this is *Tetrachaetina burgersiana* Enderlein, described from the same colony, but there are so many important characters lacking in the brief description of the species, and such probabilities that there are many closely related forms in New Guinea that I have felt compelled to describe this species as new and leave the question of the identity of Enderlein's species to the future. His genus in any event is not tenable, in my opinion.

Another species that should be considered in connection with this one is *penicillata* Hendel. The very brief description given by Hendel states that the scutellum and pleura are distinctly reddish, and the legs are reddish-yellow, with the femora at apices below on both sides brownish-striped, and the tarsi black, only the base of the mid metatarsus brownish. The fifth tergite of the male is only a little longer than the fourth or third. His comparison is with *potens* Walker, which his new species resembles very strongly. In the type male of *innocua* the fifth tergite is about as long as the third and fourth together. The dense short bristles on the posteroventral surface at tip of the fore tibia of the male of the latter could hardly be termed as "Burst" as in *penicillata*.

#### EUTHYPLATYSTOMA Hendel.

*Abhandl. Zool.-botan. Ges.*, viii, 1914, 398.

#### EUTHYPLATYSTOMA RIGIDUM (Walker).

*Jour. Proc. Linn. Soc. Lond.*, i, 1857, 32 (*Platystoma*).—*Platystoma stellatum* Walker, op. cit., i, 1857, 32.—*Platystoma punctiplenum* Walker, op. cit., v, 1861, 268.—*Platystoma parvulum* Schiner, *Reise Novara*, Zool., ii, 1, Dipt., 1868, 286.

I have seen no specimens of this species from New Guinea, having only one from Celebes, the type locality, and another from Singapore, the last sent me by C. F. Baker.

It may yet be found in New Guinea.

#### EXPLANATION OF PLATES IV-V.

##### Plate iv.

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|---|--|
| 1.— <i>Dasyortalis complens</i> (Walker) ♂<br>co-type. × 12.                    | 11.— <i>Cleitamia excepta</i> , n. sp. type. × 3.  |
| 2.— <i>Dasyortalis complens</i> (Walker). ♀<br>co-type. × 12.                   | 12.— <i>Cleitamia delandi</i> , n. sp. type. × 6.  |
| 3.— <i>Dasyortalis complens</i> var. <i>separata</i> ,<br>n. var. type. × 12.   | 13.— <i>Plagiostenopterina</i> ( <i>Plagiostenopterina</i> ) <i>aenea</i> Wied. × 6 app.       |
| 4.— <i>Antineura</i> ( <i>Adantineura</i> ) <i>kerteszi</i> de<br>Meijere. × 6. | 14.— <i>Plagiostenopterina</i> ( <i>Plagiostenopterina</i> ) <i>enderleini</i> Hendel. × 6.    |
| 5.— <i>Pseudocleitamia setigera</i> , n. sp. type.<br>× 12.                     | 15.— <i>Plagiostenopterina</i> ( <i>Stenopterosoma</i> ) <i>orbitalis</i> , n. sp. type. × 12. |
| 6.— <i>Euxestomoa bipunctata</i> Hendel. × 12.                                  | 16.— <i>Elassogaster evitta</i> , n. sp. type. × 6.  |
| 7.— <i>Cleitamoides latifascia</i> (Walker)<br>type. × 3.                       | 17.— <i>Pseudepicausta apicalis</i> , n. sp. type.<br>× 12.                                    |
| 8.— <i>Cleitamia astrolabei</i> Boisd. × 6.                                     | 18.— <i>Rivellia rufibasis</i> , n. sp. allotype. × 6.   |
| 9.— <i>Cleitamia cyclops</i> , n. sp. type. × 3.                                | 19.— <i>Rivellia dimidiata</i> de Meijere. × 12.   |
| 10.— <i>Cleitamia cheesmanae</i> , n. sp. type. × 3.                            | 20.— <i>Asyntona tetyroides</i> (Walker). × 6.   |
|   | 21.— <i>Brea contraria</i> Walker. × 6.  |

## Plate v.

- 22.—*Brea magna* Hendel. × 6.  
 23.—*Scholastes cinctus* (Guérin). × 6.  
 24.—*Scholastes aitapensis*, n. sp. paratype.  
 × 6.  
 25.—*Scholastes taylora*, n. sp. paratype. × 6.  
 26.—*Achiosoma nigrifacies*, n. sp. type.  
 × 6.  
 27.—*Achias brachyophthalmus* Walker. × 6.  
 28.—*Achias australis*, n. sp. type.  
 29.—*Lamprogaster quadrilinea* Walker.  
 × 6.  
 30.—*Lamprogaster decolor*, n. sp. paratype.  
 × 6.  
 31.—*Lamprogaster fulvipes*, n. sp. type.  
 × 6.  
 32.—*Euprosopia minuta*, n. sp. type. × 12.  
 33.—*Euprosopia dubitalis*, n. sp. allotype.  
 × 6.  
 34.—*Euprosopia setinervis*, n. sp. type. × 12.  
 35.—*Euprosopia bilineata* de Meijere. × 6.  
 36.—*Euprosopia protensa* (Walker). × 6.  
 37.—*Euprosopia potens* (Walker). × 6.  
 38.—*Euprosopia ventralis* (Walker) type.  
 × 3.  
 39.—*Euprosopia ventralis* (Walker). A  
 small specimen identified by J. R.  
 Malloch. × 3.  
 40.—*Euprosopia impingens* (Walker). × 6.  
 41.—*Euprosopia fusifacies* (Walker). × 6.  
 42.—*Euprosopia aureovitta*, n. sp. type.  
 × 12.  
 43.—*Euprosopia innocua*, n. sp. type. × 3.
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